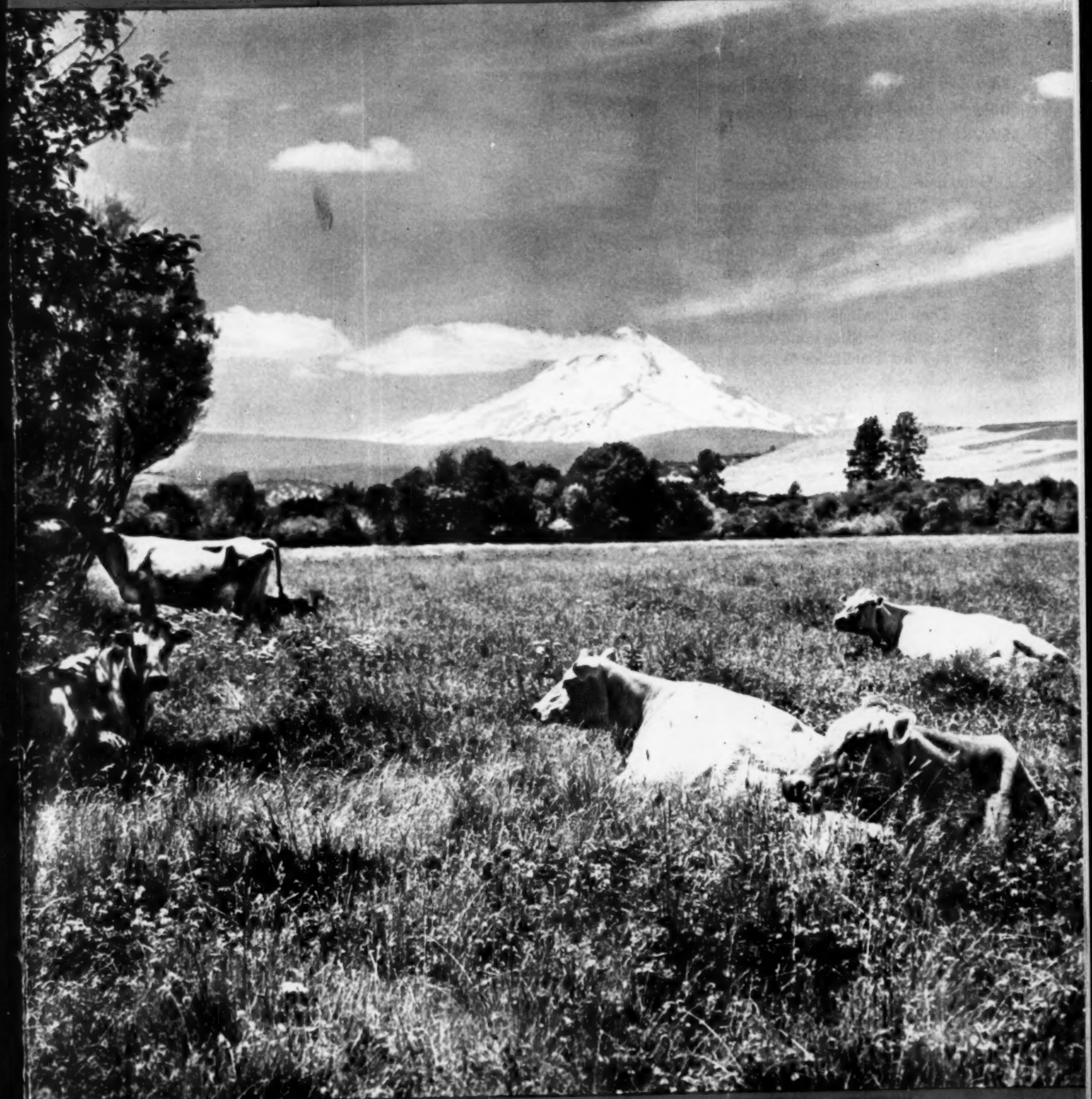
# HOARD'S DAIRYMAN

MAY 10, 1952



THE NATIONAL DAIRY FARM MAGAZINE

## New Ultra-modern Low-Friction truck engines give you

# Gas Savings UP TO 14%

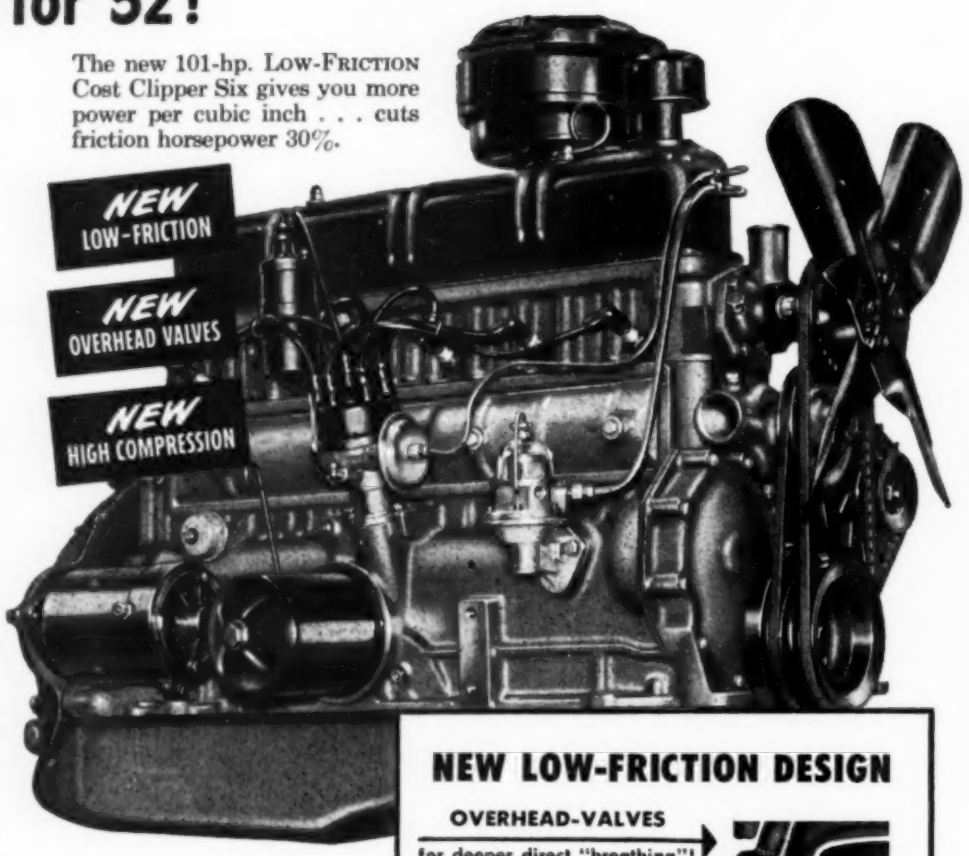
## in New Ford Trucks for '52!

**Advanced new LOW-FRICTION design LIBERATES POWER ordinarily held "captive" by engine friction! IT SAVES GAS! It saves wear!**

Good news for farm truck owners! Now—for the first time—you can get new LOW-FRICTION design in a high-compression truck engine! Ford's ultra-modern LOW-FRICTION engines break away from traditional "European" long-stroke piston design. They introduce a friction-reducing short-stroke in three completely new engines in Ford Trucks for '52.

Ford LOW-FRICTION design is the greatest advancement in truck engine design since the V-8! It incorporates new direct-breathing OVERHEAD-VALVES for efficient fuel feeding. It gives you new HIGH-COMPRESSION for extra wallop to meet today's farm hauling needs. Here's truck engineering at its ultra-modern best, something your Ford Dealer will be proud to tell you more about today!

The new 101-hp. LOW-FRICTION Cost Clipper Six gives you more power per cubic inch . . . cuts friction horsepower 30%.




**Two years of testing says they'll stand up!**

Ford's new LOW-FRICTION engines are probably the best-proved truck engines ever introduced to the American public! Two years of testing on the 101-hp. engine alone! 50,000 dynamometer test hours! Over 500,000 vehicle test miles! You can bet your bottom dollar these new LOW-FRICTION engines will stand up in toughest farm service.

### NEW LOW-FRICTION DESIGN

**OVERHEAD-VALVES** for deeper direct "breathing"!

**HIGH-COMPRESSION** . . . with regular gas!

**SHORT-STROKE** cuts piston travel up to 18%!

BIGGEST factor in reducing friction is Ford's new short-stroke. Add *Autothermic pistons* with built-in clearance control, *Precision-molded Alloy Crankshaft* to cut friction and wear at journals, *New Full Flow Oil Filter* to screen every drop of oil every time around. Total: up to 30% cut in engine friction horsepower . . . more delivered *hauling power* . . . the big reason why Ford can promise gas savings up to 14%!

**FROM PICKUPS TO 155-HP. BIG JOBS,** Fords cover every farm hauling need. Five great truck engines—101-hp. to 155-hp. Choice of V-8 or Six. Three new LOW-FRICTION engines. Increased power in two famous workhorses—239-cu. in. V-8 and 254-cu. in. BIG SIX.

Availability of equipment, accessories and trim as illustrated, is dependent on material supply conditions.

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LIGHT MODELS ☐ EXTRA HEAVY-DUTY MODELS ☐

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# FORD TRUCKS for '52 cost still less to run !

# Opinions, Brickbats, Bouquets

These columns are open to the readers of Hoard's Dairyman for the expression of their opinion on any subject, whether radical or conservative, destructive or constructive, wise or foolish, critical or commendatory. Hoard's Dairyman assumes no responsibility for opinions expressed.

## Turned to Field Chopper

HOARD'S DAIRYMAN:—We enjoy thoughts of readers printed in your paper. At least you give everyone a chance to express his or her feelings on all subjects.

Some time ago Mr. B. L. Coleman wrote on "scorched shirt tails." We, in this section of Wisconsin, have gone through the same problem he has. We are close to the lake and our grain is seldom dry enough to combine, and when we think it is, it still heats when we store it.

All the new labor-saving machines have run our investment so high that there is little or no profit in farming.

To combat both of these problems, we have turned to grass and the use of a field chopper to do all of our harvest work. Early in the season it's hay and grass silage. Then we cut our grain with binder with head removed. Follow this, in a day or two, with a field chopper and wagon. Grain and straw is then elevated into threshing machine from which we remove the grates and replace them with hardwood planks.

All this not only cuts down on machinery but also that hard to get help. Three men, one thresher, three tractors, one elevator, one chopper, two or three wagons and you have a set-up that will work very well and give you top quality grain.

I hope this may be of help to someone as the letters they have written have helped me.

Wisconsin. RALPH DESMITH.

## Put Hay in Silo

HOARD'S DAIRYMAN:—More than 50 per cent of the potential feeding value of the legume hay crops produced in the humid areas of this country has been lost in the process of trying to dry the crops into hay. That is my conclusion after many years' study of hay making.

The value of the feed lost by trying to make dry hay out in the field in the great central west and eastward, in the past 25 years, would build three silos for storing the hay crop on every 200 acres in that territory. Before you contradict that statement, let me inform you that many times I have seen enough legume hay feed lost in the rain on one farm in one year to build a silo 15 x 50 feet.

Every farmer in the corn belt has seen 50 acres of alfalfa, promising two tons of dry hay to the acre, mowed down, rained on, turned over and kicked about, in an effort to dry it, until there was scarcely a leaf left on the brown stems which by that time had about the feeding value of wood shavings—and I have seen a lot of this stuff burned after a year spent growing it and after all the man labor and machine wear getting it in shape to burn.

Fifty acres of legumes at two dry tons per acre—if it could be made into choice hay, would be 100 tons, worth $25 a ton on the market, and more than that fed to high producing cows. That would be $2,500; a considerable sum by any means of computation—enough to build a silo—and yet the farmer who loses the hay usually takes it mildly as an act of God and one of the hazards of farming. If he should lose his wallet containing $2,500 he would stop eating, tear up the premises, and yell to high heaven.

The dairy farmer who has a nice crop of legume hay ready to harvest in rainy weather and no silo, if not helpless, is surely in a pitiable position. He looks at the sky, hoping and waiting for "hay weather." All the while the hay keeps maturing, the leaves loosen, the protein, carotene, and green color begin to disappear and finally, when the sun peeps out, he mows down the deteriorating crop—and that night it rains again.

After tedding, stirring, raking, and waiting, he finally hauls to the mow the weather-beaten, unpalatable, low-protein winter feed—and when winter comes the unfortunate dairyman spends a big chunk of his milk check for bought protein feed to substitute for the choice home-grown protein he once had and lost in the rainy hay field.

The only haymaking rule that I have found to be 100 per cent reliable is that nobody can make good hay in wet weather.

Most of us will live to see the day when we will stop trying to make hay of the first cutting of legumes and instead put it in a silo, early in the year, with no loss of leaves, while it has the greatest feed value; put it in almost regardless of weather where it will lose less in storage than by any other method—and with no fire hazard.

Another great advantage of putting the first crop into the safe keeping of a silo is getting it off the land early while there is enough soil moisture to boost along another cutting.

There is no one thing in the feeding end of the dairy farmer's business that will contribute more to his profit than producing big crops of legumes, or legume-grass mixtures, and storing them for winter in the silo.

Illinois. RALPH A. HAYNE.

## "Hit and Run" Reprints

HOARD'S DAIRYMAN:—"'Hit and Run' in the Dairy Barn" is the greatest article ever published by Hoard's Dairyman. Believe me I had a big smile on my face as I read of the misfortune that befell the poor inspector who got dunked in the cow gutter. Smiles, no doubt, came to the faces of many more dairymen. All of us are familiar, too, with the conditions pointed out by Mr. Dobson. Some of us are even paying for the "privilege" of being inspected in areas where the cities are short of money.

How lucky we dairy farmers are that there are men as brave as Mr. Dobson. How fortunate we are that we have a Hoard's Dairyman that is unafraid to bring some of the problems of the dairy farmer into the spotlight. We, as individual farmers, face an almost hopeless task in trying to change any part of dairying.

Hoard's Dairyman knows our problems and can bring about change as it is, in reality, the voice of all of us. I have sold many of my friends subscriptions to your fine

*(Turn to page 409)*

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*CORALOX*, AC's patented Insulator, with its extra toughness and amazing resistance to heat shock, is the principal reason for the longer life and better performance of AC Spark Plugs.

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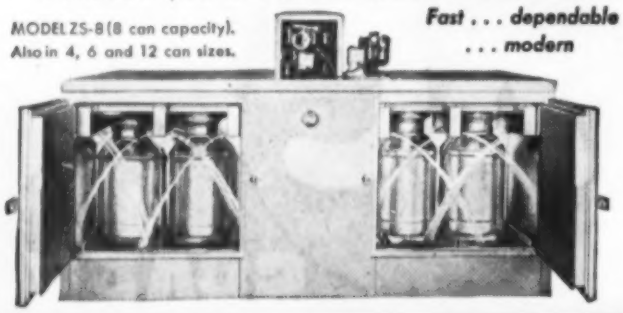

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- **EASY TO CLEAN**—Smooth-surfaced inside and out. Racks, units, water distributing pans lift out for easy cleaning.
- **LARGE WATER-TO-MILK RATIO**—Reservoir holds 15 gallons of icy water to every 10 gallons of milk to be chilled.

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# HOARD'S DAIRYMAN

*The National Dairy Farm Magazine*

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### COVER PICTURE

For our cover picture on this issue we swing to the West Coast and use the traditional scenic background of Mt. Hood for this peaceful pasture scene of a herd of Jersey cattle in clover near Dufur, Oregon.

Anticipating the inevitable question, Mt. Hood is 11,225 feet above sea level. An extinct volcanic cone, its crest, clad in perpetual ice and snow, gives rise to eight glaciers which extend down its side to an elevation of about 6,000 feet. Mt. Hood is now more frequently climbed than any other snow peak in America.

Photo by Gifford Photos.

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magazine just because I feel no dairy farmer can afford to be without it.

Perhaps we could get a little more good out of "Hit and Run" if each of us would send it, and your good editorial, to our local health departments. Maybe you could provide copies of the article to some of the subscribers who have already thrown theirs away.

Let's send 'em so many they'll think all ——— broke loose!

Iowa. WAYNE ROSTENBACH.

**Editor's Note: Reprints of the article, "'Hit and Run' in the Dairy Barn" are now available for distribution. Write to the Editorial Department, Hoard's Dairyman, Fort Atkinson, Wisconsin.**

## Use Danish Show System

HOARD'S DAIRYMAN:—N. J. M. from Nevada should be commended for his effort to bring the purebred dairy breeds to their senses! One can appreciate his article (in the O. B. & B. column, March 10 issue) after seeing a cow amble from the show ring with blue ribbon and applause knowing she was placed over an equally beautiful 900-lb. fat cow while the winner (?) herself couldn't muster much over 400 lbs. fat.

I think the majority of fair-minded breeders would honestly like to see a judging system comparable to the Danish used in this country.

However, attacking now his requirements for entering the show ring. Why not drop the magic letters M. E. suffixed to the bull's daughters' production? All he actually requires of a heifer freshening at two years is 350 lbs. fat; a three-year-old, 375 lbs. fat. The dam, meanwhile, is required to actually produce "at least 500 lbs fat on test."

Let's drop the M. E. from the daughters' production requirements. Make them produce 400 lbs. fat as junior two-year-olds and 450 lbs. fat from junior three-year-olds. Too high? Aren't these animals, by their very appearance in the show ring, supposed to be of the best? Would it exclude the smaller breeders? I don't believe it for a minute. Further, I don't think these figures are high enough.

Why not make the sires of these bulls proven plus? This might eliminate more animals than any other factor.

In his requirements for cows and heifers, four years and aged cow class, 305-day, 2x, 450 lbs. fat, M. E. —again, let's drop M. E. It's more fiction than fact.

Michigan. R. M. BRENGLE, JR.

## Likes Fence Articles

HOARD'S DAIRYMAN:—Your last two numbers have the best articles on the construction of fences that I have read. Nothing adds more to the "prosperity" look of a farm than a strong tidy fence. However, such fences in New England are seldom seen.

On my farm I am using steel fence posts purchased in 1940 and still in very good condition but have replaced timber corner posts once in the past ten years.

The force of cattle reaching through lines of barbed wire is what wrecks most fences of that type. In my case I used four and sometimes five lines of wire but cattle would get their heads through and put a great strain on the whole fence line, bending steels posts and pulling corner posts out of the ground.

Having had such success with single wire electric fence for temporary fencing, I decided that it would be practical to electrify my boundary fence. I believe it desirable to have a good permanent boundary fence to turn any cows that might want to rush or jump a single wire, also to keep out any outside stray cattle. So I rewired all my boundary fence with new barbwire, top and bottom lines fastened securely to the posts, and a middle electrified line supported on inexpensive fiber insulators, fastened to steel posts with long cotter pins and stretched over heavy porcelain corner post insulators.

These corner insulators are spiked to the post with leather washer protector and the electric wire is terminated at each corner. A small piece of wire behind the post carries the current from one line to the next. This fence requires fewer posts than the regular fence but to give the permanent look the spacing should be not greater than 18 or 20 feet.

Corner posts need not be as heavy as with the regular fence as there is no strain on the wire other than the initial stretch to make the lines tight — more for looks than from necessity.

With the electric wire in the center cattle will not reach through the fence either above or below the middle wire so there is never any pushing on the fence as in the case of ordinary four line barbed wire fence.

It goes without saying, however, that if there was a tall growing crop such as corn close to the fence, cattle would probably lean on the top wire. In my case, however, I have never had any trouble of this kind.

New Hampshire. G. L. BRIDGE.

## No Clinging Vine

HOARD'S DAIRYMAN:—I am answering the letters of "It Isn't a Woman's Place," from a Wisconsin reader and also "Sympathy for Mrs. Bickered," in the March 25 issue. If our Wisconsin friend thinks that the letter of "Bickered" was disgusting, I think his was more so.

I am, I believe, an average farm wife and I can think of nothing more rewarding than to work at the side of my husband in any job which I am able to do. I am ready to admit that a dairyman's wife doesn't always have a bed of roses. But, does a doctor's wife? Or a lawyer's wife? I don't believe that they do either. If things come too easy, they are not appreciated.

If I didn't help my farmer husband whenever and wherever I can, I would feel like a clinging vine instead of a wife and helpmate.

"Your roses may have thorns, but don't forget your thorns may have some roses, too."

New York. Mrs. A. M. W.

## Subsidize Low Wage Earner

HOARD'S DAIRYMAN:—Hearing so much about subsidies and parities, I thought I'd write in my two cents' worth.

I believe that the farm prices should go to parity without any subsidies to the farmer. In fact, I don't believe that the farmer should get subsidies at any time. If we are going to pay any subsidy to anyone at any time, it should be to the low wage earner, or the wage earner with a large family whose income is not high enough to buy the necessities for the family.

Ohio. STANLEY SARPOLUS.

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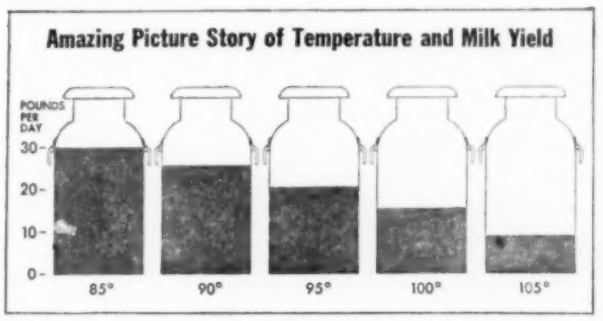


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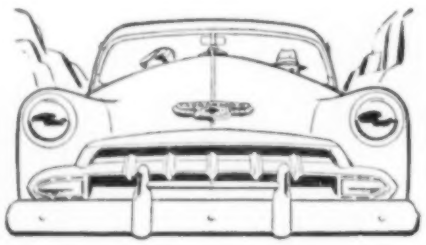
Talk it over with your Chevrolet dealer. . . . Chevrolet Division of General Motors, Detroit 2, Michigan.

***Improved Airplane-Type Shock Absorbers Are Sealed for Life***

The new, softer ride adds comfort, makes long trips seem shorter, eases strain on body and chassis. This finer ride control is *sealed for life* in sturdy airplane-type shock absorbers.



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# Washington Dairygrams

CONFUSION COMPOUNDED IN WASHINGTON. FRIENDS TODAY, ENEMIES TOMORROW. ALL EYES ON ELECTIONS. CONGRESS TO DUCK, IF POSSIBLE, CONTROVERSIAL ISSUES.

CORN SHORTAGE LOOMS. FARMERS' PLANS FOR CORN ACREAGE IS TOO LOW TO ALLOW FOR BAD WEATHER. ANOTHER 1947 AND SITUATION CRITICAL. CONGRESS DISTURBED. MAY BOOST PRICE SUPPORTS.

OUTLOOK DOUBTFUL FOR FOOT AND MOUTH LABORATORY. CONGRESSMEN MAY SHELVE REQUEST FOR 25 MILLION. FEAR THAT DISEASE COULD NOT BE RESTRICTED TO PRUDENCE ISLAND, RHODE ISLAND, SITE.

ANTHRAX HAS CAUSED CONCERN IN CONGRESS. HOUSE COMMITTEE HAS HELD HEARINGS AND WILL HOLD MORE. NOTHING TO ADD TO HOARD'S DAIRYMAN'S REPORT OF APRIL 25.

GRAIN SHORTAGE SCANDAL. SENATE INVESTIGATION INDICATES USDA NOT INVOLVED BUT WAS LAX IN ADMINISTRATION. SHORTAGES BY WAREHOUSEMEN AND OTHERS, INCLUDING SOME FARMERS. POSSIBLE BLACK EYE TO ENTIRE FARM PROGRAM.

FARM INCOME TAX RETURNS MAY HAVE TO BE ON ACCRUAL BASIS IF SALES OF DAIRY CATTLE ARE TO BE TREATED AS CAPITAL ASSETS. THAT IS DESIRE OF BUREAU OF INTERNAL REVENUE. CONGRESS MAY STEP IN AGAIN TO COMPEL THE BUREAU TO CARRY OUT THE INTENT OF CONGRESS WHICH MADE NO SUCH REQUIREMENT.

USDA APPROPRIATION CUT. HOUSE COMMITTEE REDUCED USDA 3 PER CENT BELOW BUDGET REQUEST AND 69 MILLION UNDER LAST YEAR. DAIRY BUREAU INCREASE TURNED DOWN. WOULD HAVE HELPED DHIA WORK.

DAIRY PICTURE. DEMAND STRONG. PRICES STEADY EXCEPT BUTTER AND NONFAT DRY MILK. IN MARCH FARMERS RECEIVED $4.92 PER CWT. (103 OF PARITY) COMPARED TO $4.54 IN MARCH 1951. MILK COW NUMBERS DOWN 1 PER CENT FROM 1951 AND 16 PER CENT BELOW 1945. BEEF COWS UP 29 PER CENT SINCE 1949.

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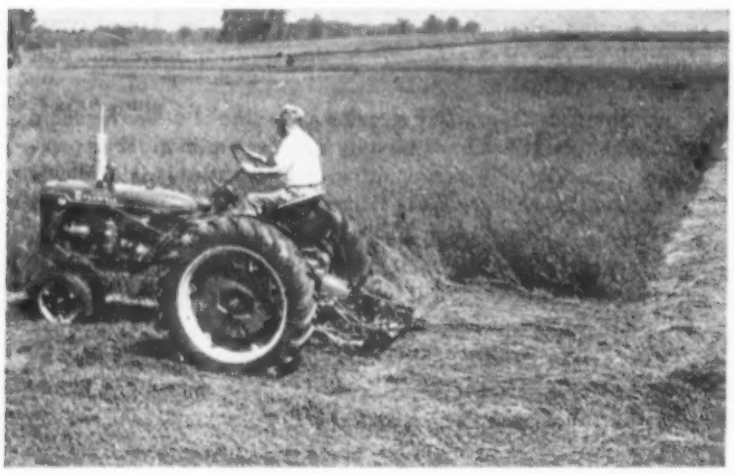
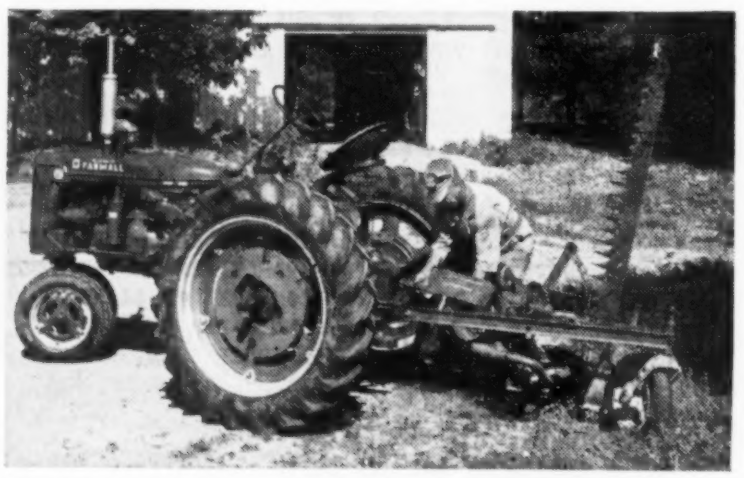
**Make hay with more feed value** by fast handling that saves perishable proteins and vitamins. Mow when you and your hay are ready. Cut an acre in 17 minutes—up to 35 acres in a 10-hour day—with a Farmall Super C and a McCormick mounted or semi-mounted mower. The Super C is ideal for haying. Double-disc brakes let you make neat, square turns without stopping. Farmall Touch Control raises and lowers the cutterbar quickly—saves minutes and muscle work. You mow, rake, bale, haul—handle *all* haying jobs with this economical two-plow tractor. It can prevent feed-spoiling delays when your bigger tractor is needed for other rush jobs.



**Mow at top capacity in tough going** with a heavy-duty McCormick rear-mounted mower and a Farmall Super C. The tractor power take-off runs at the proper speed when the thrifty, valve-in-head engine is developing *full* power. You can mow rank or wiry hay at speeds up to 5 mph.



**Fast change from mower to baler saves time** during haying. Two-bolt hitch makes it easy to attach or detach the McCormick semi-mounted mower. The Super C operates a 7-foot mower with fuel-saving economy . . . has the proper power-weight balance for pulling heavy loads of hay.

**Put up field-fresh hay fast** with a Farmall Super C and McCormick mowers, rakes, balers, and field harvesters. Ask your nearby International Harvester dealer to demonstrate how a Farmall Super C and matched McCormick hay equipment can help you get more feed value from your hay—and save time and money too! You can buy on the Income Purchase Plan and let the Farmall Super C and McCormick hay equipment pay for itself in use. Get the facts about this plan from your IH dealer.

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# How You Can Finance Your Farm

**If you plan to buy a farm, here are the main sources of credit available to you, including long and short term.**

*by I. F. Hall*

EVERY year a new group of young men get started in farming. They have reached that age when they strike out on their own. It has been a most encouraging time for young men who have been ready to start during the past 10 or 12 years. Many who purchased farms six or eight years ago have them nearly paid for.

### *Should one buy or rent? . . .*

With land values, dairy cattle, and equipment now at extremely high prices, many young men should consider carefully whether they should invest their savings and go heavily into debt. The debt is much greater than any other generation ever tried to pay off.

The farmer must have the know-how if he is able to meet high operating expenses. I don't think there will be as many failures due to not being able to pay the interest on the debt as due to inability to meet the ever-increasing overhead costs of building and equipment maintenance, taxes, insurance, labor, power costs, gas and electric bills, and other costs. Interest is now a smaller part of farm operating costs than it was a generation ago.

Unless a young man has had plenty of farm experience and sound business ability, it may be wise to rent a fairly good sized business rather than to go into debt for a smaller, inefficient business. For those who do not have financial help from their families, consideration should be given to all the available sources of credit.

**YEARS REQUIRED TO PAY FOR A $12,000 FARM AT 4% INTEREST**

| Per Cent of Down Payment Made | Annual Amount of Earning Paid on Debt and Interest | | | | |
|---|---|---|---|---|---|
| | $200 | $400 | $600 | $800 | $1000 |
| | years | years | years | years | years |
| No down payment ..... | | | 42 | 24 | 17 |
| 20 per cent down payment.. | | 83 | 27 | 17 | 13 |
| 40 per cent down payment .. | | 33 | 17 | 12 | 9 |
| 60 per cent down payment.. | 83 | 17 | 10 | 7 | 6 |

It is very important to make a fair sized down payment when purchasing a farm if one expects to be free from debt when the net earnings are small.

### *Sources of credit . . .*

There is nothing strange about one borrowing money to start farming. It is the way most farm owners begin. There are four main types of lenders of farm mortgage credit. They are: individuals, the federal land banks, insurance companies, and commercial banks. Besides these, there are some tenant farmers and veterans who can obtain supervised farm loans from the Farmers Home Administration, a government agency.

**Individual loans**—It is very common for the individual who sells his farm to take either a first or a second mortgage for part of the purchase price. The rate of interest and payment arrangement differs greatly by individuals. Usually the term of the mortgage is short, perhaps five years with renewal clause.

It is best when such loans are made to make them for 20 or more years with regular yearly payments on the principal.

**Federal Land Bank**—The local national farm loan associations handle the federal land bank loans.

A federal land bank loan is available to all farmers who can qualify and whose security meets the requirements of the loan. Each borrower is required to buy stock in the local association in amount equal to 5 per cent of his loan. Such stock is held as additional security for the repayment of the loan. When the loan is paid, the cost of the stock is returned to the borrower. The borrower must first make an application for a loan to the local loan committee. An appraisal is made by a land bank appraiser who is appointed by the Farm Credit Administration.

The local loan committee acts upon the report of this appraiser on the value of the security. If the report is favorable, they decide upon the amount and terms of the loan that may be offered. The amount cannot exceed 65 per cent of the normal agricultural value of the appraised value.

The most common land bank loans are made for 20 to 34½ years and some as long as 40 years. The interest rate is 4 per cent and payments are made twice a year. A 20-year loan would require $37 every 6 months for 20 years

HOARD'S DAIRYMAN
Founded in 1885

to pay off a $1,000 loan. The first payment would be $20 for interest and $17 on the principal. By the end of 10 years, the payment of $37 would be $12.23 for interest and $24.77 on the principal. At that time you would still owe $586.94 on each $1,000 borrowed.

**Life Insurance Companies**—Some life insurance companies have made farm mortgage loans. Many of these have been written for short terms of only five years. Most of them now write long term loans much the same way as the federal land bank. The rate of interest and the percentage of land value loaned varies with different companies. It is advisable to contact your local insurance office to learn what can be done.

**Commercial Banks**—In many farming areas the local bank has funds that can be loaned on good farm land. These loans are usually for a short term. The interest rate and the percentage of the land value loaned varies with different banks. There are many examples where a local boy has been helped by the local bank when other loaning agencies could not. Usually the local bank is of much greater service for production loans.

**Farmers Home Administration**—The federal government has set up funds independent of other loaning agencies to help tenants and veterans to become farm owners. These loans are usually made only to families who are not able to obtain credit from other agencies.

This is a closely supervised loan. Many individuals object to so much supervision as a budget is usually made out a year ahead which includes not only an estimate of all income and farm expenses, but also all personal expenses. Many of the borrowers need business guidance and sometimes much more than the local representative is capable of giving.

The amount of the loan may be as much as the value of the farm at 3½ per cent interest. There is a limit on the amount loaned to an individual. The term of the loan is for 40 years. A $1,000 loan would require a payment of $46.88 each year for the 40-year period. The borrower must agree to transfer the loan to some other agency as soon as he can obtain credit on favorable terms.

### *Sources of production credit . . .*

There are many sources of short term credit. The dealers and merchants who sell the goods as well as commercial banks, production credit associations, private agencies, cooperative loaning agencies, and government agencies will extend credit.

**Local merchants or dealers**—The highest cost for credit is from your local dealer or merchant. He is usually not set up in the loaning business.

It will pay one to obtain a loan from the bank or other loaning agencies and pay cash to the local dealer or merchant. Usually there is a 2 to 5 per cent discount for cash.

Installment buying is very common . . . a few dollars down and a certain amount each month. When the merchant makes such a settlement, the money involved is usually borrowed by the merchant from some loaning agency set up for such purpose. Interest is sometimes figured ahead and added to the original amount so one is paying twice the interest he is quoted. Some of these installment loans have interest rates as high as 40 per cent.

**Commercial Banks**—The largest share of the short term credit used in agriculture is provided by the local bank. This is probably as it should be as there is a local bank in nearly every community. When one has a checking account in the bank, the banker is familiar with the farm business and can help its depositors take advantage of cash discounts and other needs.

The security required and interest rate vary with different banks. Usually a three-month note is sufficient for smaller amounts. On larger loans, an assignment on the monthly milk check may be taken.

**Production Credit Association**—This is a branch of the Farm Credit Administration set up for the purpose of extending short term farm credit. These associations are cooperative and every borrower becomes a member when he obtains a loan and buys stock equal to 5 per cent of the loan. The usual interest rate is now 5½ per cent.

An appraisal is made of the farm personal property and a chattel mortgage taken on the personal property as security for the loan. Dairy assignments are taken to the extent of one-fourth to one-third of the monthly milk checks when dairying is the main source of income.

**Private and Cooperative Credit Associations**—In many communities there are both private and cooperative credit organizations which loan for short term on about the same basis as the production credit associations.

**Government loans**—The Farmers Home Administration makes production and subsistence loans to farmers. Such loans are for animal raising expenses or for the purchase of livestock and equipment. These funds are available only to farmers who can not obtain funds from other sources.

These loans are secured by chattel mortgages on the personal property. The rate of interest is 5 per cent and must be paid off in five years.

**THE END**

# Farm Flashes . . . .

## Seasonal reminders and research notes for the dairyman

### PROVIDE FOR LIGHTNING PROTECTION

Lightning is the leading cause of fires on farms and in rural areas. The National Board of Fire Underwriters states that lightning causes 30 per cent of rural fires and on farms alone

fire losses from lightning average 35 million dollars each year.

Today there is no need for this destruction since economical protection is available to everyone and may be installed easily and quickly by skilled mechanics.

A protection system does not keep lightning from striking the building, but if lightning does strike on a properly rodded building, this system carries the current harmlessly to the ground without fire or other damage.

It is essential for property owners to select a reliable lightning protection service. The proper installation of the equipment requires technical knowledge, training, and experience. Do not attempt to install lightning protection yourself. A faulty system can prove more hazardous in a storm than no system at all. Improvements or changes in a building may also make a lightning protection system ineffective. Whenever a change is made, you should notify the man that installed your equipment. In addition, periodic inspections of the system should be made.

### LEAD IN PAINT POISONOUS

Paint which is peeling off barns or fences is just as poisonous to cattle as fresh paint, if they both contain lead.

Cattle are often poisoned when they lick fresh paint from newly painted surfaces, but they can also be poisoned when they chip off loose paint with their teeth or eat chips that have fallen to the ground.

Poisoning from lead acts quickly. However, many deaths can be prevented if a veterinarian treats the animal immediately.

If paint is peeling from a surface, the safe thing to do is keep your cattle away from it until the loose paint is removed and disposed of.

Another thing, don't throw empty paint buckets or batteries into barnyards or pastures. Livestock licking the paint bucket or eating the lead plates in the battery may soon get enough lead to kill them.

### WAYS TO SAVE GASOLINE

Michigan engineers report that many tractor owners could save more than 100 gallons of tractor fuel every year by stopping waste around storage tanks and in tractor operation.

Most of the waste around storage tanks is due to leaks and carelessness, waste that takes an indirect bite out of your pocketbook and may cause a direct accident. This waste and danger can be cut down by making sure there are no leaks in the tank, faucets, or hose. Check that the tank man doesn't spill the gasoline or fill the tank too full.

Further suggestions include keeping the tanks or barrels in the shade with the caps on tight. Fuel stored more than four months may have enough gum in it to cause valves to stick.

These same precautions are suggested for filling the tractor tank. Repair any leaky hoses and don't fill the tractor tank too full. Use a funnel for filling the tank. The carburetor should be adjusted for full loads only and only when the engine is warmed up. Correct setting of the carburetor and idling needle is important in saving fuel also.

The right carburetor setting can save up to 100 gallons of fuel a year. The idle needle and idling speed screw correctly set also can save 100 gallons. In addition using higher gear and throttling down can save up to five gallons a day.

### INOCULATION RAISES SOYBEAN YIELDS

For a successful soybean crop, it is important that the seed be inoculated. It costs about 20 cents an acre but may boost the yield by as much as 30 per cent.

In addition to increasing yields, inoculation adds to the protein content of beans, makes them more vigorous and better able to withstand unfavorable, early growing conditions, and leaves more nitrogen in the bean straw and root to be plowed under after combining.

A commercial inoculant is best, but soybeans can be inoculated with soil taken from a field that grew a successful crop of soybeans the previous year. For each inoculation it is best to moisten the seed slightly and mix about a half pint of screened soil with each bushel of seed.

Treating the seed for protection against disease organisms may mean poorer results of inoculation because organic seed treatments prevent the nitrogen-fixing bacteria from multiplying and may actually kill them. If seed is high in germination, the benefits from the seed treatment usually will be small compared to those obtained from inoculation, according to Iowa agronomists.

**Washington Dairygrams**

FOR BUSY DAIRYMEN...we present a new, up-to-the-minute feature direct from Washington, D. C. Don't miss WASHINGTON DAIRY-GRAMS beginning in this issue on page 411.

### EASY TO SEED BROME

There are at least three ways to plant bromegrass to get even stands and it is not as hard to seed as many think. The methods are (1) mix the seed with fertilizer; (2) mix the seed with the seed of one of the small grains; (3) use one of the newer seeders especially adapted for seeding brome.

When mixing bromegrass seed with fertilizer, Rutgers University agronomists recommend using about 200 pounds of fertilizer and 10 pounds of brome per acre. Put the mixture in the fertilizer compartment of the grain drill and seed very shallow. Shallow seeding is needed also if brome is mixed with wheat, barley, or oats through the grain compartment.

Let the seeds fall on top of the ground and then go over the field with the cultipacker to press them into the ground. This is the method used with the new cultipacker seeder.

With either of these methods the clover or alfalfa can be sown through the grass seeder attachment to the drill.

### GIVE COWS ARTIFICIAL SHADE

Illinois dairy experts say that building a homemade shade for dairy cows on pasture can be one of the easiest, most profitable investments you can make.

When a cow gets too hot, her milk production drops off, sometimes pretty sharply. Since cows

do not sweat, they must cool off in the shade. On quiet days when there is no breeze, heat is extra hard on cows. On such days the University of Illinois cows have had temperatures 4-8 degrees above normal.

The most desirable arrangement is to have trees in the pasture or shade by the side of the barn. However, if you don't have this, you are money ahead to provide artificial shade.

Probably the best type of artificial shade is four poles with a flat frame roof of scrap lumber covered with some old straw or hay weighted down so that it won't blow away. Straw or hay is better than any metal for roofing because air can move through the straw or hay.

The roof should be about eight feet off the ground and the shelter should be at least 10 or 12 feet long on each side. This area can accommodate about six cows at once.

Remember, too, that plenty of water helps to keep cows cool.

### MILK FEVER STRIKES BEST COWS

If one of your high producing cows becomes unusually nervous, wobbly, and unwilling to move a day or two following calving and holds her head to one side, chances are good she has milk fever.

When you see these symptoms, be sure to call your veterinarian immediately for treatment, since untreated cows usually die. Even though cows with milk fever may be seriously sick, they respond quickly to treatment by veterinarians and usually are on their feet and eating within a short time.

Most cases occur between the twelfth hour and third day after calving and milk fever is merely a partial or complete paralysis that is followed by unconsciousness.

Don't try to give the cow a drench or any other form of liquid medicine, because her throat may be paralyzed. This might cause the medicine to go into her lungs and cause pneumonia. Instead, prop her with bales of hay so that she will not lie on her side.

There is no sure way to prevent milk fever. It is recommended, however, that high producing cows be given at least a six weeks' dry period and in addition for 72 hours after calving, do not milk them out completely.

---

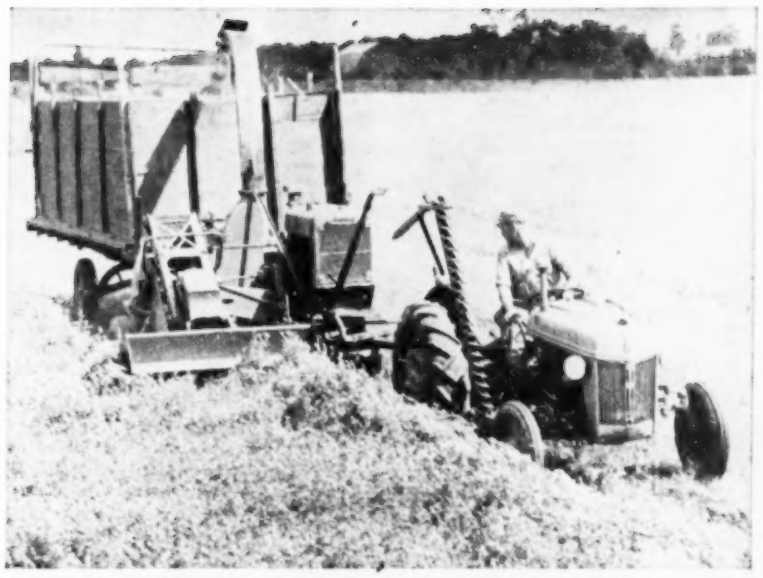
It should be apparent that increase in numbers of cows under test is not of itself important. Merely testing cows does not increase their production. The testing returns are the costing sheets for the herd and must be intelligently used to point the way to better stock and better farming.

—*A. H. Ward,* New Zealand Dairy Board.

# What's New In Making Grass Silage

*by L. H. Hodges*

**Direct-cut method shows promise for low-cost, high quality silage. Sulfur dioxide is new preservative.**



In direct-cut method hay goes from standing crop to silo without wilting or preservative.

THE making of grass silage offers the best practical method of preserving a forage crop that is to be consumed by your own livestock.

At present the three methods of putting up grass silage are: (1) with a preservative, (2) by wilting without a preservative, and (3) by direct cut with no preservative. Only two of these methods are being recommended by most scientist or silage experts, but farmers are using the third one so it is certainly worthy of consideration here.

### *Preservatives for grass silage . . .*

The surest way to make top quality grass silage every time is to ensile it with a moisture content of from 70 to 75 per cent and add a preservative. The most common preservatives are molasses, grain corn, corn and cob meal, cereal grains, and acids. A new one to add to this list is sulfur dioxide gas.

**HOW MUCH PRESERVATIVE?**

| Preservatives | Legumes Lbs. per ton | Legumes and Grasses Mixed Lbs. per ton | Grasses and Cereals Lbs. per ton |
|---|---|---|---|
| Molasses — approximately 50% sugar | 60 | 40 | 30 |
| Corn or small grains—ground | 150 | 125 | 100 |
| Corn and cob meal | 200 | 150 | 125 |
| Dried whey | 40 | 30 | 20 |
| Phosphoric acid (75%) | 20 | 15 | 10 |
| Sulfur dioxide gas | 7 | 5 | — |

In order to be able to apply the correct amount of any preservative, you must be able to estimate the size of the load. It is estimated that fresh chopped grass weighs about 15 to 20 pounds for each cubic foot. That would mean that each foot of depth in a 7x14 wagon rack would be about a ton of material.

Blackstrap molasses can be delivered to the grass at the intake of the blower, but be sure you stop its flow when the feed table is empty. If you don't, the blower will be plugged up when you are ready to start up again. A better method is to pipe the molasses to the top of the silo and let it flow onto the stream of chopped grass as it leaves the blower pipe.

Several companies can supply equipment for putting on molasses along with their crop blower. These are generally driven direct from the blower and are equipped with a device for stopping the flow when no green material is being fed in.

| A stream of molasses that will fill a quart bottle in | Will deliver in ten minutes |
|---|---|
| 40 seconds | 40 pounds of molasses |
| 30 seconds | 60 pounds of molasses |
| 20 seconds | 80 pounds of molasses |

Any good positive displacement pump having an intake and discharge opening at least one inch in diameter can be rigged up to do this job. The rates of flow shown in the above table may help you judge the amount of molasses being put on.

The simplest way to add ground corn or grain is to level off the load, estimate its weight, and spread the meal evenly on top. A homemade hopper and feeding device can be built to add the ground material to the blower or elevator feed table if you so desire.

Molasses, ground corn or grain, corn and cob meal, and dried whey will add to the feeding value of the silage so you can add more than the recommended amounts if you desire to do so.

The use of certain acids as a preservative will produce a good grass silage. The AIV method, as it is called, uses a mixture of hydrochloric and sulfuric acid. Phosphoric acid of 75% strength and fluorine free may also be used. It is generally diluted with about three times its volume of water before putting it on the forage. Because of the corrosive actions and other undesirable features of acids, they have not been widely used by farmers.

### *Sulfur dioxide gas available . . .*

The use of sulfur dioxide gas as a preservative was first tested about 1940. Since that time farmers have begun trying it and at least three chemical companies are now producing the gas and equipment. The equipment consists of a 150-pound cylinder of liquified sulfur dioxide gas, a length of pressure hose (about 50 to 60 feet), a valve and handle assembly, and a metal lance or probe about four or five feet long.

When about four or five feet of the forage has been blown into the silo and spread evenly and tramped, it is ready for its first "shot" of gas.

Lay the cylinder in an improvised cradle near the silo in an inverted position with the valve pointing downward. Hook up the lance and hose according to the manufacturer's instructions. Climb into the silo with the lance and then proceed as shown in the illustrations.

Based on last year's prices the cost of these preservatives for each ton of crop ensiled will be about $1.40 for sulfur dioxide gas, $3.40 for corn and cob meal, and $1.65 for molasses. Since the meal and molasses will add their feeding value to that of the silage and sulfur dioxide prevents silage carbohydrates from being used, these figures should not be compared directly.

Regardless of the type of preservative used they increase the cost and the labor required to put up grass silage. I think that the nuisance of having to apply a preservative is one of the reasons why grass silage making has not gained more rapidly in popularity.

### *Wilted grass silage . . .*

If the crop is wilted to a moisture content ranging from 65 to 70 per cent, it can be put up without a preservative. This will eliminate the bother of putting on preservatives but it introduces another objection that tends to make it somewhat impractical for the so-called "average" farmer.

The moisture content of the crop must be controlled between the narrow limits of 65 to 70 per cent when using the wilted method. Various pieces of equipment have been devised for testing moisture content. One of the simpler of these is the oil method described in Wisconsin Stencil Circular 313. I would strongly urge that you obtain some kind of moisture testing equipment if you plan to put up grass silage by the wilting method.

A simple test that will help you gauge the moisture content of alfalfa, clover, or fine grasses, but not the coarse grasses, is to examine the chopped material. Squeeze a handful tightly and then release it. The ball of green material should expand slowly, and break apart into several sections when the moisture is about right for making silage. If it fluffs up at once and falls apart completely, *(Turn to page 449)*

Sulfur dioxide can be used as a preservative. Equipment consists of a cylinder of liquified sulfur dioxide gas, a length of pressure hose, a valve and handle assembly, and a metal lance or probe about four or five feet long. Pattern at the right indicates the distribution of penetrations of sulfur dioxide. Note the two-foot intervals.

J. Edward Townsend, New York
Senior Winner

Edward Terry, California
Junior Winner



Roland Hintze, Washington
Vo-Ag Winner

# The Judging Contest WINNERS

THIS was a record-breaking year for the 22nd Annual Hoard's Dairyman Cow Judging Contest. New records were established in all but the college division with a total of **74,086 entries** received, 33 more than the previous all-time high, made in 1950.

To the winners go our heartiest congratulations. To the thousands not listed among the winners, we sincerely hope you enjoyed participating in this annual judging event. On the following pages you will see how the cows were placed, as well as the official judges' reasons. If you have saved a copy of your placings, you can determine your score by checking with the official scoring key at the bottom of page 418.

### Two Have Perfect Scores

Out of the 74,086 entries there were just two perfect scores. They were made by Ed Townsend, farm manager from Rose Hill, New York, and Roland C. Hintze, vocational agriculture instructor at Lake Stevens, Washington.

The tie was broken by having the two men place the five classes on general appearance, mammary system, dairy character, feed capacity, and constitution. When the reason scores were totaled, Townsend was the winner, having 2,275 points as compared to 2,070 for Hintze. A perfect reason score would have been 2,500.

Ed Townsend is well qualified to be winner of first place in the senior division of the largest judging contest of its kind. He has worked with dairy cattle his entire life, having been employed on some of the best known dairy herds in the East. Born and raised on a New York dairy farm, he spent a year with William K. Hepburn, Sr., at the Foremost Guernsey Association Farm after graduating from high school, before taking a two-year course at Cornell University. While at Cornell he worked in the dairy barn under herdsman Paul Dean and took the dairy cattle judging course two years, taught by Dr. E. S. Harrison, now manager of Harden Farms, New York.

Townsend had also worked at Flying Horse Farm, Massachusetts; Afton Farms, New Jersey, and McDonald Farms, New York, working with such men as Ronald Wilson, K. C. Sly, and Henry Thomas. For the past 8½ years he has been the working assistant manager on the F. B. Mills Seed Company farm. The father of two children, Townsend has entered the Hoard's Dairyman Cow Judging Contest several times, although this is the first time he has been a winner.

Roland Hintze, second place winner, has taught vocational agriculture at Lake Stevens, Washington, two years. A former F. F. A. member, he has participated in numerous judging contests and compiled an enviable record with his Jersey heifers in the show ring. In 1948 he was a member of the State College of Washington dairy judging team and currently coaches the local F. F. A. dairy judging team. Hintze is married and the father of a baby girl.

Nine contestants tied for third place, each with a score of 496. On the basis of reasons, third place winner is Arthur Gerlach, St. Ansgar, Iowa, followed by Ronald Cochrane, Gouverneur, N. Y.; Duane Miller, Paullina, Iowa; Leonard Slyter, Kansas State College; J. H. Gnos, Paulsbo, Wash.; D. A. Rogers and David Cox, both of Cornell University, Ithaca, N. Y.; Ed Mello, Modesto, Calif.; William Bergman and Mark Alley, both of Kansas State College, Manhattan, Kansas.

Honorable mention in the senior division goes to William Slot, Stevensville, Md.; Mrs. Gladys DeBose, Many, La.; Paul Stevenson, Hopkins, Mo.; Russell Nelson, San Luis Obispo, Calif.; Doyle Gaither, Tryon, Okla.; and Willis Mouttet, Choteau, Okla.

### California Boy Top Junior

While there were no perfect scores in the junior division, no less than eight juniors were tied for first place with scores of 496. The reason scores were almost as close, but when the scores were totaled 15-year-old Edward Terry, a freshman in the Gustine High School, California, had a 15-point lead over 17-year-old Wilbur Mulhair, Goshen, N. Y.

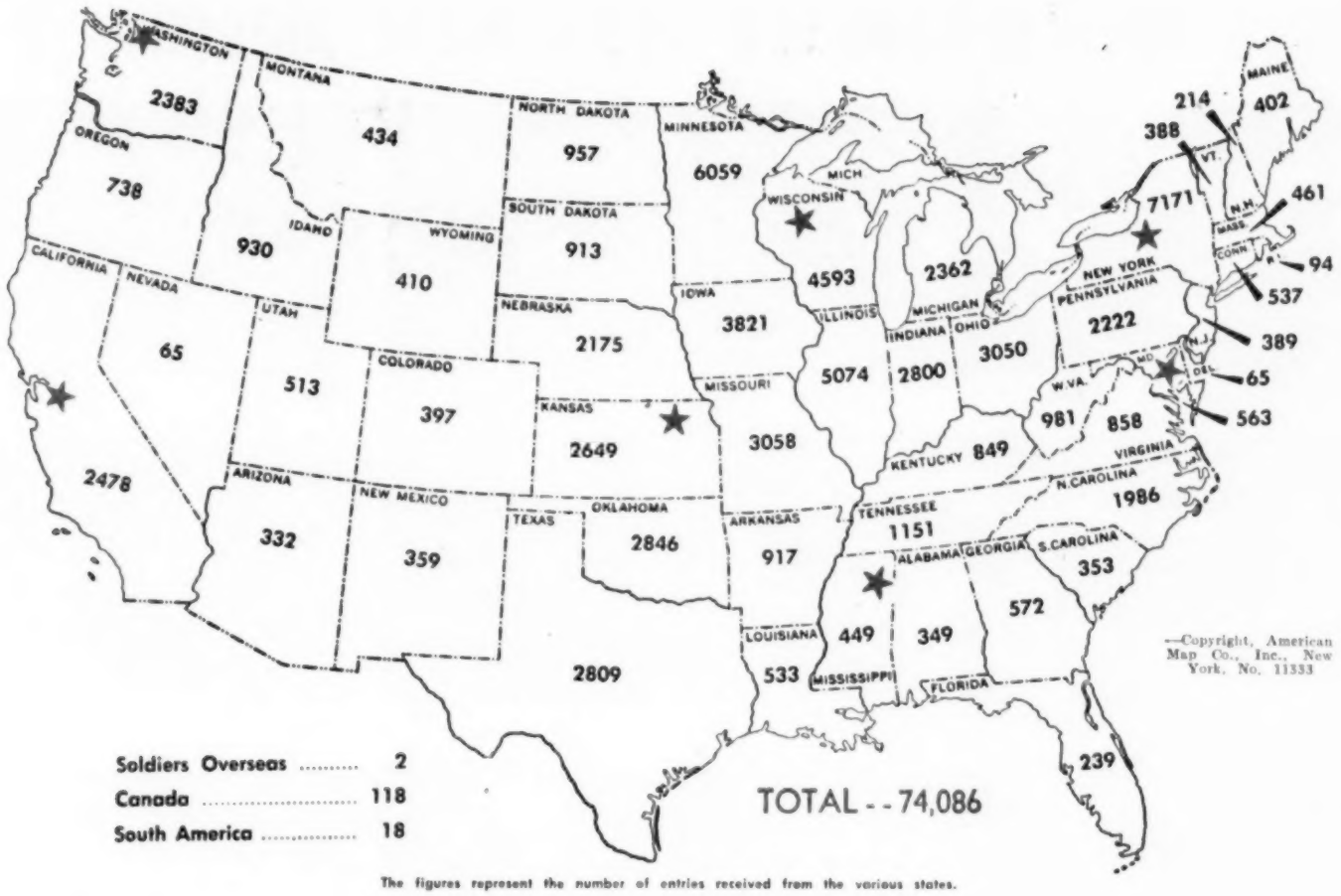
According to Edward Terry's vocational agriculture instructor, C. E. Lehfeldt, Edward already has an excellent start in the Holstein business, having 15 registered females. He has judged in numerous contests, although this is his first attempt in the Hoard's Dairyman picture contest. As a 4-H member he exhibited animals in several local fairs and just recently won a purple ribbon and two blue ribbons at the Junior Grand National Livestock Show in San Francisco in the F. F. A. Division. Edward's father, a

## FAMILY WINNERS

Here are the winners of the family division of the 1952 cow judging contest. James Andersen, with his parents, Mr. and Mrs. Arlis Andersen of Starkville, Mississippi.

## HIGH SCHOOL WINNERS

This is the vocational agriculture class of Thorp, Wis., winner of the high school division. Roy A. Swanson is coach.




The figures represent the number of entries received from the various states.

★ Roland Hintze Lake Stevens, Wash. Vo-Ag Winner ★ Edward Terry Gustine, Calif. Junior Winner ★ Kansas State College Manhattan, Kans. College Winner ★ Thorp High School Thorp, Wis. High School Winner ★ A. Anderson Family Starkville, Miss. Family Winner ★ 4-Leaf 4-H Club Stevensville, Md. 4-H Club Winner ★ J. E. Townsend Rose Hill, N. Y. Senior Winner

dairyman all his life, milks 75 Holsteins on his two ranches and a younger brother, Gene, also has a good herd started.

Third place winner was Billy Brader, Yellville, Arkansas, followed by Burton Peiffer, Marathon, N. Y.; Richard Boyd, Belleville, N. Y.; Gary Shepard, Muscatine, Iowa; Hugh Johannsen, Gooding, Idaho; and James Henderson, Shamrock, Texas.

There was a six-way tie for ninth place, which on the basis of reasons was won by 14-year-old Peter Slot, Stevensville, Md. Tenth, eleventh, and twelfth places were won by Dale Baldwin, Freeborn, Minn.; Bonnie Anderson, Ottawa, Kan.; and Larry Whitmore, Cody, Wyo., respectively.

Honorable mention in the junior division goes to Ray Greene and Paul Garrett, Apulia Station, N. Y.; Jack Underwood, Jenks, Okla.; Larry Sheppeard, St. Mary's, Kan.; David Costa, Dartsmouth, Mass.; Ray Berry and Bill Masteller, Jessup, Ia.; Clarence Anderson, Willard, Mo.; John Schauer, Hartford, Wis.; Duane Hardy, Meridian, Idaho; and Wallace Broyles, Choteau, Okla.

### Andersons of Mississippi Top Family

First place winner in the family division is Mr. and Mrs. Arlis Anderson and James, Starkville, Miss., with an average score of 484.6, six points more than the family of Mr. and Mrs. Milfred Gregory, Goble, Oregon.

Widely known in 4-H and dairy circles, the Andersons have played a leading role in dairying in the state of Mississippi. Mr. Anderson is extension dairyman and has been associated with judging in one form or another his entire life. While he gives much credit to F. W. Atkeson, Kansas State College, for his success in judging, Anderson began his judging career while a 4-H club member and later was a member of the Mississippi livestock judging team, being second high man in the Southeastern States Intercollegiate Contest, high man on sheep. A graduate of Mississippi State College, he took graduate work at Kansas State College.

According to her husband, Mrs. Anderson has been an avid follower of judging since attending the 1941 National Dairy Show. In addition, she is intensely interested in her husband's work as well as the 4-H dairy program, of which James is an integral part. They say that James has actually grown up with his 4-H club cow, Standard Charming Trinket. They have been almost inseparable since she was six weeks old and he three years of age. At the All-American Junior Jersey Show in Dallas in 1950, "Trinket" was grand champion. Last year James took his cow and her two heifers to *(Turn to page 435)*

## COLLEGE WINNERS

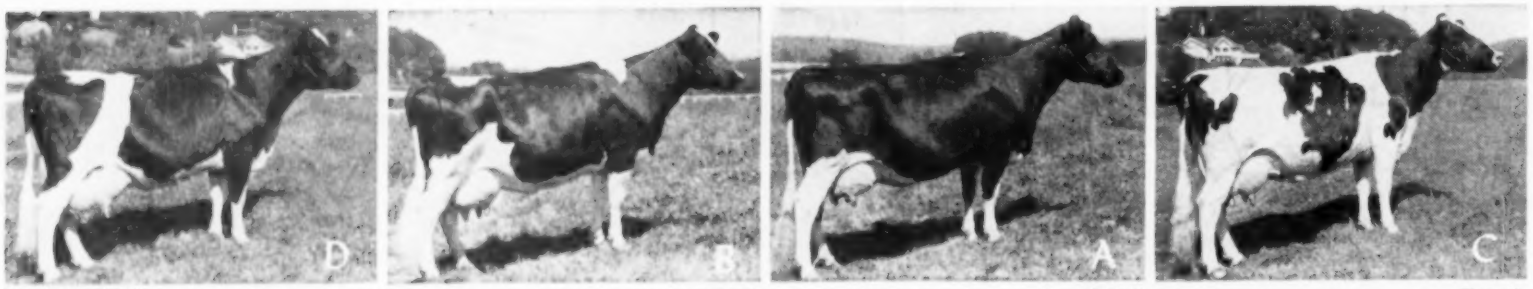
The Kansas State team includes left to right, front row: Joe Armstrong, Richard Hartkopf, Frank Hutchinson, and Mark Alley. Second row: Sherlund Prawl, Glen Krumme, Carl Stauffer. Third row: Roy Harkrader, William Bergman, Leonard Slyter, G. H. Beck, coach

## 4-H CLUB WINNERS

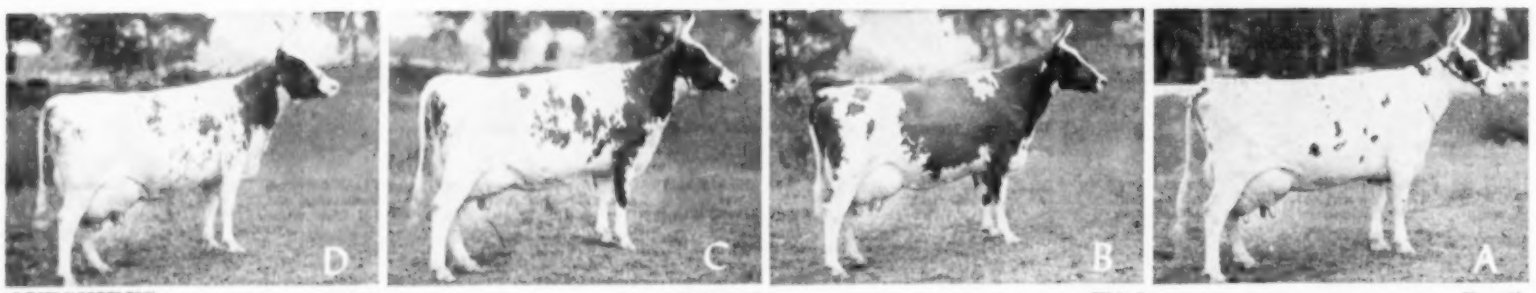
Here is the winning 4-H club, the Stevensville 4-Leaf 4-H Club, Stevensville, Maryland. Seated, left to right: Billy Walbert and Warren Sadler. Standing, left to right: Charles A. Chance, Floyd Butler, and Peter Slot. Peter was 9th high in the junior division.

# - - - Here's how the cows were placed - - -

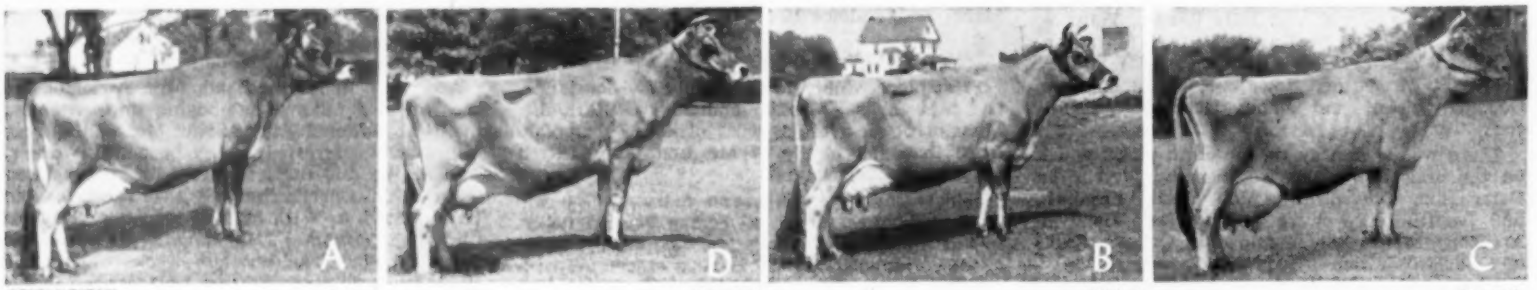
GUERNSEYS First Second Third Fourth



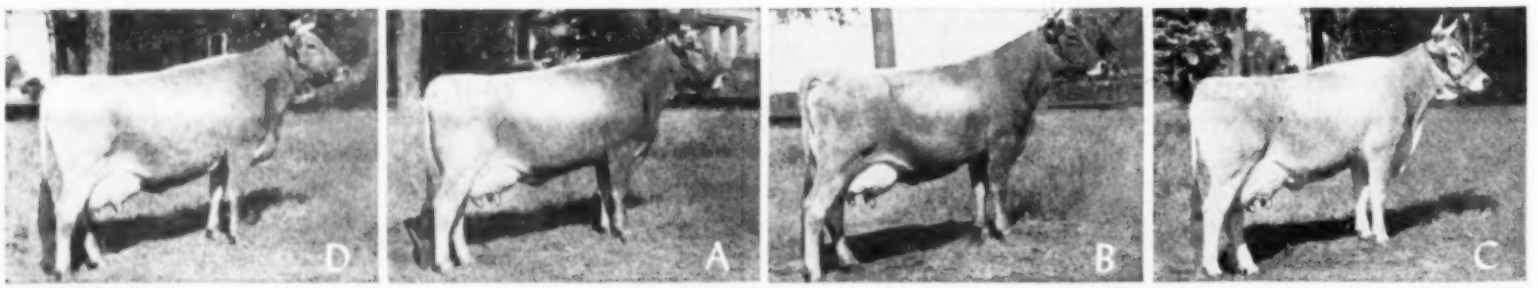

HOLSTEINS First Second Third Fourth




AYRSHIRES First Second Third Fourth




JERSEYS First Second Third Fourth




BROWN SWISS First Second Third Fourth

## Cow Judging Contest Scoring Key

**GUERNSEYS A B C D**

| | | | |
|---|---|---|---|
| A B C D—100 | B A C D—86 | C A B D—74 | D A B C—44 |
| A B D C— 90 | B A D C—76 | C A D B—58 | D A C B—38 |
| A C B D— 94 | B C A D—66 | C B A D—60 | D B A C—30 |
| A C D B— 78 | B C D A—36 | C B D A—30 | D B C A—10 |
| A D B C— 74 | B D A C—46 | C D A B—28 | D C A B—18 |
| A D C B— 68 | B D C A—26 | C D B A—14 | D C B A— 4 |

**HOLSTEINS D B A C**

| | | | |
|---|---|---|---|
| D B A C—100 | B D A C—96 | A D B C—80 | C D B A—44 |
| D B C A— 88 | B D C A—84 | A D C B—60 | C D A B—36 |
| D A B C— 92 | B A D C—84 | A B D C—76 | C B D A—40 |
| D A C B— 72 | B A C D—60 | A B C D—52 | C B A D—28 |
| D C B A— 68 | B C D A—60 | A C D B—36 | C A D B—24 |
| D C A B— 60 | B C A D—48 | A C B D—32 | C A B D—20 |

**AYRSHIRES D C B A**

| | | | |
|---|---|---|---|
| D C B A—100 | C D B A—96 | B D C A—88 | A D C B—52 |
| D C A B— 88 | C D A B—84 | B D A C—72 | A D B C—48 |
| D B C A— 96 | C B D A—88 | B C D A—84 | A C D B—48 |
| D B A C— 80 | C B A D—68 | B C A D—64 | A C B D—40 |
| D A C B— 72 | C A D B—64 | B A D C—52 | A B D C—40 |
| D A B C— 68 | C A B D—56 | B A C D—48 | A B C D—36 |

**JERSEYS A D B C**

| | | | |
|---|---|---|---|
| A D B C—100 | D A B C—90 | B A D C—82 | C A D B—34 |
| A D C B— 84 | D A C B—74 | B A C D—62 | C A B D—30 |
| A B D C— 96 | D B A C—76 | B D A C—72 | C D A B—24 |
| A B C D— 76 | D B C A—46 | B D C A—42 | C D B A—10 |
| A C D B— 64 | D C A B—44 | B C A D—32 | C B A D—16 |
| A C B D— 60 | D C B A—30 | B C D A—22 | C B D A— 6 |

**BROWN SWISS D A B C**

| | | | |
|---|---|---|---|
| D A B C—100 | A D B C—92 | B D A C—64 | C D A B—46 |
| D A C B— 94 | A D C B—86 | B D C A—44 | C D B A—32 |
| D B A C— 86 | A B D C—70 | B A D C—56 | C A D B—38 |
| D B C A— 66 | A B C D—42 | B A C D—28 | C A B D—16 |
| D C A B— 74 | A C D B—58 | B C D A—16 | C B D A—10 |
| D C B A— 60 | A C B D—36 | B C A D— 8 | C B A D— 2 |

# - - - Here are the judges who placed them

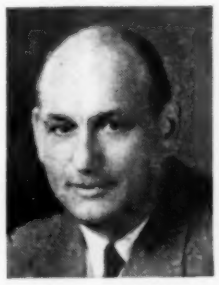
GEORGE DRUMM

Official judge of the **GUERNSEYS** was **George Drumm,** head of the Dairy Department at California State Polytechnic College.

A native of Kansas, Drumm graduated at Kansas State College and was a member of the championship dairy cattle judging team in 1920.

Following graduation he obtained his master's degree at Iowa State College and moved West to become herdsman and dairy instructor at the University of California. In 1928 he became manager of a 2,000-acre ranch in Carmel Valley and later became superintendent of Patricks Farm's 600 Holsteins at Salinas. In 1931 he was hired to take over the dairy department at Cal Poly. In 1948 the college Holstein herd averaged 639 lbs. butterfat in the 2x-3x class for the national production championship.

Drumm also coaches the college dairy cattle judging team. During the last three years the team has twice placed fifth in the national collegiate judging contest at Waterloo, Iowa.



G. E. RAITHBY

**G. E. Raithby,** professor of Animal Husbandry, in charge of dairy production at Ontario Agricultural College, Guelph, Canada, was official judge of the **HOLSTEINS.**

Born on a Huron County farm, he graduated from the University of Toronto in 1922. While attending college he was a member of the livestock judging team. Following graduation he joined the animal husbandry staff at Ontario Agricultural College, specializing in sheep and beef cattle. In 1930 he took over the responsibility of the college dairy herd and the teaching work in connection with dairy production.

Raithby coached his first dairy judging team in 1929 and except for the war years Ontario has had a judging team in the United States each fall since. He has judged dairy cattle at all major shows in Canada and has judged several leading American shows.

In addition to his teaching work, Raithby is an official classifier for the Ayrshire, Jersey, and Guernsey breeds in Canada.

W. S. WATSON

The **AYRSHIRE** judge was **W. S. Watson,** Kansas dairyman and owner of Ayr-Line Ayrshire Farm, consisting of a herd of some 50 registered Ayrshires.

A former Jersey 4-H club member, Watson became interested in Ayrshires when he showed Fred Williams' Ayrshire herd on the show circuit for several years.

He started an Ayrshire herd of his own in 1941 and had the unusual honor of breeding and owning the grand champion Ayrshire cow at the National Ayrshire Show in 1948.

A regular exhibitor at the Dairy Cattle Congress, Watson was premier breeder in 1948 and 1949, was winner of the coveted Kiussendorf trophy in 1950, and in 1951 showed the grand champion Ayrshire bull.

In addition to operating his own farm, Watson has judged numerous county and state shows, he has posed cattle of all breeds in many sales, and is an official classifier for the National Ayrshire Association.

W. E. WEAVER

The **JERSEYS** were placed by **W. E. "Bill" Weaver,** Indiana farmer and Jersey breeder. Born and raised on a Southern Indiana farm, Mr. and Mrs. Weaver and their family are now operating a farm 20 miles from where he was born.

Bill purchased his first Jersey heifer in the early '20's. He made an enviable record as a 4-H club member and in 1927 took a dairy short course at Purdue University. In the fall of 1927 he showed the Creine Hall show herd under Frank Barber.

In 1929 he and his father sold their home herd and Bill went with Graham Jersey Farms, Indiana, where he stayed 11 years. During that time he developed some state production champions that still stand.

Mr. and Mrs. Weaver, with their three children, have developed an outstanding Jersey herd and during the past several years Bill has judged many of the leading Jersey shows. In addition, he is presently director at large of The American Jersey Cattle Club.

ARTHUR R. PORTER

The **BROWN SWISS** CLASS was placed by **Arthur R. Porter** who is in charge of the dairy husbandry program at Iowa State College.

Brought up on a dairy farm in New York State, Art came to Iowa as a cow tester and enrolled at Iowa State College where he was a member of the winning college judging team in 1930. He graduated at Iowa State the following year, after which he spent four years as manager of Iowana Holstein Farms, then joined the extension staff at Iowa State.

In 1939 he received his M. S. degree from the University of Minnesota and in 1947 was transferred to resident teaching and research work at Iowa State, the post he held until being placed in charge of the Dairy Husbandry Department.

In addition to teaching and research, Porter has coached the Iowa State College dairy cattle judging team the past five years, during which time the team has won two firsts and two seconds at the Intercollegiate Dairy Judging Contest.

# - - - and here are the judges' reasons

### GUERNSEYS

A is an outstanding top for this class excelling the others in feed capacity, constitution, and udder.

A has more feed capacity than B, having a stronger muzzle and a deeper and wider barrel. A is stronger in constitution, as indicated by more depth and width of chest, with greater spring of fore ribs. A has a more capacious udder which is more nearly level on the floor and considerably higher attached in the rear than that of B. A has a more typical Guernsey head with more breed character and is stronger over the loin than B. I grant that B is somewhat sharper over the withers and has a stronger fore udder.

B goes over C in constitution, being somewhat deeper and considerably wider in the chest and has larger nostrils and muzzle. B has an advantage over C in udder in that her fore attachment is stronger and her teats much more squarely placed. I do give C an advantage in being stronger over the loin and having a smoother tail setting.

I placed C over D mainly on her stronger constitution, as shown by more depth and spring of fore ribs. C's udder is not so badly quartered and halved and it is more evenly balanced than that of D. D has a somewhat light right rear quarter, but has a squarer teat placement.

I left D at the bottom because of her weakness in constitution, lack of feed capacity, and her unbalanced and quartered udder.

### HOLSTEINS

I placed D over B because she shows more breed character and refinement than B. While D may not be quite as strong through the crop region or as wide and high in the thurl region, she is smoother than B at the tail head, has finer quality bone, more development of front udder, less halving in rear udder, and longer and more correctly shaped teats. D shows more veining on the body than B.

I placed B over A on breed and dairy character, more refinement in the head, and cleaner cut in the throat region. Both cows show constitution and capacity, but B is more angular, wider at the pins, thinner through the thighs, and shows more of the dairy type shown in the top place cow than does A. Granting to A more development of fore udder, she lacks the amount of rear udder shown on B and the front teats of B are placed more correctly, not toward the outside of the udder as seen in A.

A over C is considered an easier placing. Granting to C more evidence of dairy character, A is stronger in constitution, has more capacity and appears to be considerably larger than C. A is more nearly level over the hips, smoother in the pelvic region, has more bone and stands more correctly on both front and rear legs. A has more evidence of veining on the udder and while she may lack capacity of rear udder, the rear teats on A are straighter than those on C.

While C shows evidence of producing ability, she was placed fourth and last in this group because she lacks the size, strength, and smoothness shown in the other cows.

### AYRSHIRES

I placed D over C because she shows more balance, carries out straight over the topline, and is stronger over the loin than C. D has greater spring of rib, more body capacity, stands on straighter hind legs, and carries a lot of strength and breed character.

C was placed over B because she is smoother on the floor of the udder and has a stronger fore attachment of udder with larger milk veins and more veining on her udder. In addition she shows more quality of udder and has the most desirable udder in the entire class. B is a trifle weak in fore attachment, is narrow in her rear attachment and her front teats point to the rear. Also, she does not carry out as smoothly in the rump as does C. B also shows a little weakness in the jaw. However, B is stronger in the loin than C.

A was placed below B and at the bottom of the class because she has the weakest fore and rear attachments of udder; her udder is rather badly quartered with the teats pointing out; and she lacks the smoothness and balance of the other cows in the class. In my opinion she is an easy bottom in the class, while D, C, and B are very close.

### JERSEYS

To me A was an outstanding top in this class. She is a very nicely balanced cow, blends smoothly throughout her entire body, has strong udder attachments, and is strong over the topline and stands on good legs.

She placed over D because she is longer in the neck, sharper over the withers, and is more desirable in teat placement. D is a trifle short in the neck, a little coarse in the shoulders, and her teats do not point straight down. D does have good length of body, a high, wide rear udder attachment, and her fore udder is well attached.

D placed over B for having greater spring of rib and more width in the chest. B has lots of dairy character and plenty of length of body but is narrow in the chest and lacks in spring of rib. B's udder is a little narrow in rear attachment and shows a tendency of breaking away. In addition, the udder has a pendulous appearance, the teats hang below the hocks, a condition to guard against in breeding dairy cattle.

While C has beautiful body conformation, she must stand at the bottom of this class because her udder is completely broken away from the body. Note how the udder bulges in front and the rear udder attachment is narrow, showing a definite broken condition.

### BROWN SWISS

In placing the class of Brown Swiss cows D A B C, it seemed to divide into two pairs. I placed D over A because she is a larger cow, deeper through the rear rib and deeper through her heart. She shows more spring of rib than A. The udder on D appears higher and wider in its rear attachment, although A has less quartering and more veining on her udder and a more smoothly attached front udder. A also has sharper withers and a leaner neck.

A places over B quite easily. She is a smoother and more uniformly balanced cow, deeper through the fore rib and fuller back of the elbow. The udder on A is wider in its rear attachment and more nearly balanced in the rear quarters, B showing uneven. A's udder is less quartered than B's; she has the added advantages of a stronger loin, smoother tail head, and fuller crops than B. However, B is a stretchier cow with a longer neck.

I placed B over C because she is a longer bodied cow with a longer, leaner neck and cleaner throat. B's udder is more nearly level on its floor, longer in the fore quarters and has teats of more desirable size than C. B is sharper and smoother over the withers than C, which appears open at the top of the withers. On the other hand, C is deeper in her body, especially through the front rib, and her udder is more evenly balanced from the rear view.

# "I Prefer Grass Silage To Sudan For Late Summer Feeding"

*by J. B. Abbott*

**This Vermont dairyman feels he gets more pounds of nutrients into his cows by ensiling May-June surplus than from sudan.**

TWENTY odd years ago when I finally learned to use a complete fertilizer with a 1-2-2 ratio instead of plain superphosphate for fertilizing my pasture, I was really pleased with the results. The grazing was much better than anything which I had previously produced. The percentage of white clover in the sward was much higher and the rather inferior bentgrasses and sweet vernal tended to give way to the more desirable Kentucky bluegrass.

But the size of the farm units in this "neck of the woods" was established in the days of horses rather than tractors and is too small for present conditions. Despite liberal fertilization, I just could not produce enough grazing for my herd.

J. B. ABBOTT
Vermont dairyman

So I started plowing up the old swards of bluegrass, bentgrass, and white clover and seeding to timothy-ladino, orchard grass-ladino, and later on brome grass-ladino which were reported to yield about twice as much. Results were so good that I was sure I had the world by the tail on a down hill drag. But I didn't.

### Needed More for Late Summer

It was no trick at all to produce more feed than I could use in May and June, but I still didn't have enough grazing in July and August. And I still hadn't solved the problem of saving the May-June surplus. Ladino clover is about as easily cured for hay as a good crop of lettuce. In our normally catchy weather at that time of year I could choose between two courses, neither desirable. I could mow the crop and spoil it while trying to cure it . . . or let it stand, waiting for good weather, in which case the grass would overtop and smother out the clover.

I finally solved that problem by limiting the acreage for early season grazing to whatever the cows could keep properly grazed down and ensiling the surplus from the ungrazed portion of the pasture. The ensiled material, with a suitable preservative, provided really first class manger feed. However, it took some years more of experience to convince me that I could afford the expense of ensiling feed for the herd to use in July and August when, in theory at least, the cows might better be harvesting their own feed.

I think I have tried about everything which grows well in this part of the country as a supplemental crop for late summer grazing. For my conditions sudan grass seems to be best, but I have had troubles with sudan. In the first place, I have to prepare a seedbed and plant the crop right when I should be cultivating corn and harvesting the first crop of hay or grass silage. In the second place, I have had difficulty getting a freshly plowed seedbed firm enough so I could get a good stand of sudan. And finally, as often as not, sorghum spot disease or something of the sort damages the crop seriously about when I am ready to graze it.

Even at best I do not get too much feed from an acre of sudan. If I graze it as early as I believe to be safe, there isn't much feed there. If I let it grow three feet or more tall, there seems to be a lot of feed there—and there still seems to be a lot of feed left after the cows give it up as a bad job! I am fairly certain that it would not pay me to starve high producing cows into eating it.

It seems to boil down to this conclusion: If I have a piece of workable land which needs plowing, which otherwise would produce little or nothing in August, and which I have time to plow and seed in early June, I am willing to grow sudan. But I regard it as a temporary expedient at best and believe that I can deliver a pound of TDN in the cow's paunch cheaper from ensiled May-June surplus than from any supplemental late summer grazing crop. And with more certainty of success. There isn't much risk of failure of pasture vegetation in May and June. There is plenty of risk of failure in the hot, dry weather of late summer.

### Use 7-Year Rotation

My crop rotation on tillable pasture tends to be a year of corn for silage, a year of oats (also for silage), and five or more years of ladino-brome pasture. Normally I use lime when needed as shown by test, seed down with 0-10-20 or 4-12-16 fertilizer, carrying 50 to 100 pounds of borax per ton and topdress annually. I use a high potash fertilizer as long as I succeed in holding the legumes and then shift to a high nitrogen fertilizer for the last two or three years when the stand is dominantly grass.

On pasture which is less readily tillable or subject to erosion, I simpy rip up the old grass sward with the field cultivator, work it awhile to kill the grass, and lime, fertilize, and seed without growing either corn or oats. In such cases, of course, I do not get such a good kill of bluegrass and hence the bluegrass tends to crowd out the ladino much sooner.

On crop land the rotation and fertilization tend to be about the same as on tillable pasture except that alfalfa and red clover take the place of ladino. In addition, the crop land gets relatively more manure and less fertilizer. As a hay crop or even for grass silage, ladino is not entirely satisfactory as it does not yield as much as alfalfa or red clover and is hard to mow and worse to cure. Its great advantage is that it produces a good aftermath which, unlike alfalfa, can be grazed without injury to the stand.

I am committed to grassland agriculture to the extent that I want some 75% or more of my land in legume-grass mixtures but not to the extent that I am ready to throw the plow away and omit corn from the rotation. (I might feel different about corn if I had a sticky, wet clay soil.) A year of corn followed by a year of oats helps me get rid of bluegrass, which is by way of being a weed in timothy-ladino or brome-ladino stands.

### What to Do With Oats?

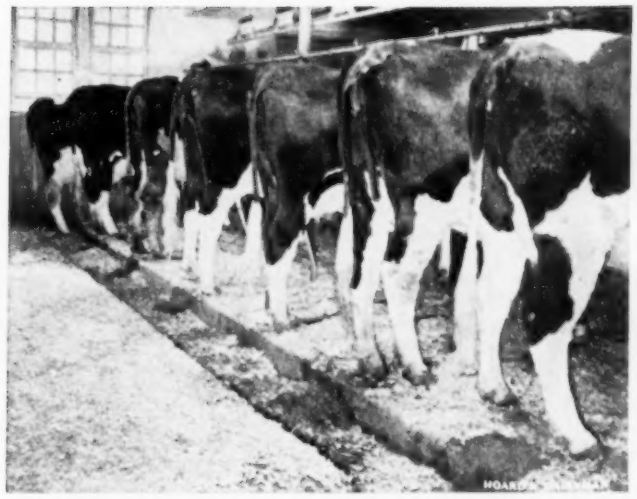
The oat crop, which I need in the rotation to give me something from the land the year I seed down, used to be a bit of a problem. What to do with it? Without horses I didn't particularly need either the grain or the straw. Like ladino clover it is a bit in the lettuce class to cure for hay. On well manured land lodging becomes a major problem, especially with the taller growing, heavier yielding varieties. The oat crop, however, does make good grazing but, unfortunately, for only a very brief period.

And the oat crop makes good silage. In theory, oats cut for silage in the dough stage should need no preservatives. In practice, I simply do not dare let such tall growing varieties as Advance and Ajax stand that long. One thunder shower with a whiff of wind and I would be in trouble. Of course I could avoid that trouble by growing some of the shorter straw varieties—and take a yield of five or six tons of silage per acre instead of ten or twelve. Maybe that would be better where acreage is not so limited.

In my cropping system the grass silage, which I need to supplement short pasture in late summer, is almost a byproduct rather than a crop grown especially for the purpose. I have to do some reseeding every year. That gives me oats for ensiling. I have to have, for late summer, a larger acreage of ladino-brome than I can use in May and June. That gives me surplus feed to ensile. So, it doesn't look like good sense to grow sudan or any other temporary grazing crop, except as a temporary expedient. **THE END**

Abbott says oats makes good silage. Part of his 1951 crop can be seen behind his granddaughters and their dogs.

These cows, in large comfort stalls, were not brushed or curried for 12 days. Note cleanliness of all body parts compared to cows at right.



These cows were tied in the shorter and narrower stalls. Note their lack of cleanliness at end of 12 days without brushing or currying.

# Will Cows Produce More In Larger Stalls?

*by I. D. Porterfield*

**Eight of nine cows produced from 12 to 97 lbs. more milk per week in large stalls than in smaller stalls.**

WE ARE convinced that cow comfort is important and will influence the size of the milk check. We will grant that this report is just a "starter" in the study of cow comfort. Its significance cannot be denied, however; hence, this report to American dairymen on our findings at the West Virginia Agricultural Experiment Station.

Back in 1921, our cow stalls were put in at West Virginia University. They were tie chain stalls 42 inches wide and 66 inches long. In most barns this wouldn't be considered a small stall. It so happened that we had a few very large Holstein cows in our herd. We were having trouble keeping them clean and preventing them from standing in the gutter.

In the fall of 1948, we installed some comfort stalls. A comfort stall is a trade name and does not differ too greatly from the Hoard type stall. If you will compare the comfort stall, as illustrated, and the tie chain stall, you will note that the significant difference between the two is the width and length of the platform.

If you were to increase the width of your cow stalls from 42 to 49 inches, you would replace seven 42-inch stalls with six 49-inch stalls.

Our Holstein herd is being used in this study and each cow spends one winter in the comfort stall and the next in the tie chain stall. In other words, the cows are reversed at the beginning of each winter. Each fall the first-calf heifers, as they freshen, are equally distributed as nearly as possible in the two types of stalls.

What did the cows tell us?

First of all, during one winter, the cows in the smaller (tie chain) stalls sustained 26 injuries as compared to eight for the cows in the large comfort stalls. The major portion of the injuries were bruised hocks or skinned knees. There were, however, five injuries to the cows in the small stall which were not leg injuries. They were flank injuries and knots appeared that approached the size of a volley ball in diameter.

Why should this occur?

It appeared that the 42-inch stalls were too narrow and each time the cow got up or laid down she bruised her flank against the pipe partition.

It was also observed that the cows in the small stalls sustained severely bruised hocks which can be partially attributed to the short 66-inch platform. Sometimes the cows in the small stalls, when lying down, had their rear legs in the gutter and at other times even a portion of the udder was in the gutter.

Were the cows really more comfortable?

During the winter of 1949-50, we found that the cows in the larger stalls were spending an average of 10 hours and 12 minutes per day lying down as compared to eight hours and 48 minutes for the cows in the smaller stalls. Last winter we found even greater differences. The cows in the larger stalls spent an average of three hours and six minutes more per day lying down than those in the smaller stalls.

When the milk records of these animals were compared, we found that eight of the nine cows produced from 12 to 97 lbs. more milk per week while they were in the large stall than they did in the small stall. Only one animal produced slightly less in the larger stall.

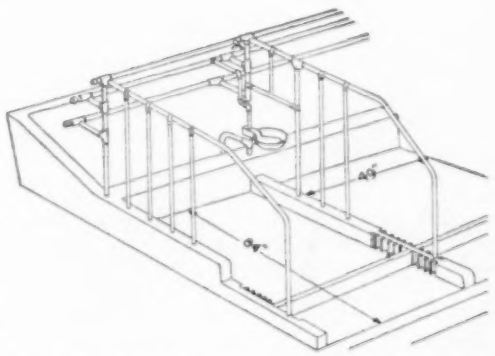
The two photographs on this page show the difference in cleanliness of the cattle. To make a true test of the two stalls, we thoroughly cleaned all visible signs of manure from the cows in both types of stalls and then did not brush or curry the cows for the next 12 days. The photographs show the results. The cows in the larger stalls remained much cleaner than those in the small stalls.

Based on our work, there was no difference between the two types of stalls in the amount of bedding used, nor in the amount of time required to clean them.

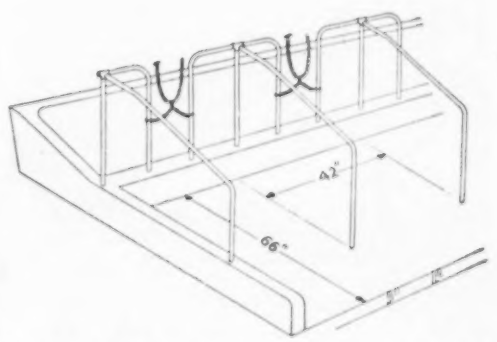
It is readily admitted that this experiment can be criticized and that we should have used the stanchion stall instead of the tie chain. After all, there are more stanchions in use today than any other type of stalls. The tie stalls were already being used for our Holstein herd, however, and it was felt that they were more comfortable for the cow than the stanchion.

A question that remains unanswered is "Would we have found any difference between the two stalls had the tie chain platform been as wide and long as the comfort?" At the present time, we are comparing the comfort (Hoard type) stall with the conventional stanchion stall and the Dri-Mag (modified Hoard stall). The Dri-Mag is a trade name and does not differ too much from the comfort stall except that the feed trough is raised and there are no curbs between the stalls or crossbars in the rear of each stall.

The stanchion and Dri-Mag platforms are 48 inches wide and 72 inches long. The comfort stall is 49 x 84 inches. Three or four years hence we should be able to arrive at some definite conclusions as to which of these give the best results. **THE END**



Sketch of the 49 x 84-inch comfort stall used in trials.



Tie chain stall, 42 x 66, was compared with comfort stall.

# Pole Structures . . . That Last

**How to treat poles with preservatives that will prevent harmful, weakening wood rot.**

*by L. S. Hamilton*

POLE-frame buildings are as practical, and can be almost as permanent, as the conventional type. Their cost of erection is considerably less. Equipment sheds, barns, poultry houses, in fact even dog kennels and farm homes, have been designed as pole-type structures. Such structures are only as durable, however, as the poles themselves. They support the unit and anchor it to the ground.

Wood-rotting fungi are the most important cause of wood failure in most parts of the United States. Where moisture, air, and temperature conditions are favorable, these fungi are a constant threat to the service life of wood.

Where poles are concerned, these factors are favorable for the greatest length of time in the groundline area, from the surface down to a depth of 6 inches to 1 foot, depending on the character of the soil. Below this, there is usually a shortage of air. Above groundline, greater extremes in temperature and moisture take place. This explains groundline failure.

Pole butt showing groundline treatment with wood preservative. Sheathing paper wrapping will give protection.

The sapwood (light-colored outer portion of the wood of trees), rots more quickly than the heartwood (dark-colored inner portion). Therefore if poles are to be used in their natural state, they must have a high proportion of heartwood.

### These woods are good for 20 years . . .

Some species decay more rapidly than others because of the great variance in the quantity and type of natural preservative substances contained in the heartwood. The heartwoods of the cedars, the junipers, black locust, osage orange, red mulberry, catalpa, bald cypress, redwood, Pacific yew, and southern cypress contain sufficient of the preservatives so that they will last at least 20 years under conditions favoring decay.

Service lives of 60 years and more have been obtained from posts and poles of some of these woods. Such species make excellent poles for pole-frame buildings, but only if there is a large amount of heartwood.

Chestnut, an old favorite for long service, has been left out of the list because the chestnut being used now has been dead ever since the chestnut blight, and is not only structurally weak but has lost most of its natural durability.

Species other than those listed generally have a life expectancy of less than 20 years,—some will fail in two or three years. Obviously then, they should not be used in their natural state in a pole structure, but should have preservative substances artificially applied before being put to use.

### Two groups of preservatives . . .

For adequate protection, the chemicals must penetrate the wood and sufficient quantities must be retained. The sapwood of all species is more easily penetrated than the heartwood, and therefore poles in the round should be used for treating rather than square-sawn timbers.

There are a great many wood preservatives available for use, but they may be grouped into two categories,—toxic oil solutions and toxic water solutions. Some of the former are creosote, pentachlorophenol, and copper naphthenate. Among the toxic water solutions are: copperized chromated zinc chloride, blue vitriol, Osmosalts, Wolman salts, Celcure, Chemonite, and zinc meta arsenite. Water-borne preservatives leach out more readily and therefore do not offer as great protection.

### Pressure treated poles . . .

Of all artificially treated poles, the longest service will be rendered by those which have been treated commercially by pressure methods, to definite specifications. Both the oil-and water-soluble preservatives are used for pressure treatment.

Poles pressure treated with creosote should last an average of 30 years or more. Those treated commercially by pressure with pentachlorophenol or copper naphthenate should give almost the same length of service, although they have not been in use long enough to establish such service records. Some of the water-borne preservatives when applied under pressure have given protection for 20 years, but results have been more variable than with the toxic oil solutions.

Pressure treated poles may be purchased from certain companies which are engaged in wood preservation. Prices vary considerably but as an example, a recent quotation on creosoted poles follows: F.O.B. treating plant prices range from 2½ dollars for a 12-foot pole (4-inch top), to 14½ dollars for a 25-foot pole (7-inch top). Although the initial cost of such poles may seem high, their cost per year of service is low.

Many commercial treating plants will custom treat poles cut from the farmer's own woodlot. This is an excellent way of obtaining durable, reasonably-prized poles.

### Home treatment of poles . . .

A great many farmers do not have naturally durable species in their woodlots. Nor do they live close enough to a custom-treating plant to have their non-durable species treated. Must they buy commercially treated poles, or is there some way in which they can cut costs by using poles from their own woodlots and giving them a preservative treatment at home?

Home treatment may be applied and if carried out properly will greatly prolong the normal life of many common woodlot species. However, one must realize that by cutting costs he is cutting corners to some extent, and that at least a few years' service for the structure will be sacrificed.

As stated previously, the toxic oil solutions are the best preservatives. In order to secure adequate absorption of the oil preservative the butt of the poles must be fully dry and completely free from bark. Creosote must be applied by a hot and cold bath technique.

With the butts of the poles immersed above groundline, the creosote is heated to a temperature of 180° to 200° F. and maintained at that temperature for 5 to 8 hours. The creosote should then be allowed to cool and the poles left in the cool creosote for 10 to 12 hours. During the entire treatment, the level of the creosote should be maintained well above the groundline area on the poles.

The price per gallon of creosote varies from 30 to 65 cents, depending on the grade and quantity purchased. A retention of 6 pounds of the preservative per cubic foot of wood immersed should be your goal.

With pentachlorophenol and copper naphthenate also, the butts must be dry and peeled. These preservatives will be absorbed by the pole simply by immersing the butts in a cold solution of the preservative. Concentrated forms of each of these preservatives are the most economical. They may be diluted to the proper strength with clean fuel oil or kerosene. Pentachlorophenol should be diluted to a 5 per cent solution. Solutions of copper naphthenate should contain between 1 and 2 per cent of copper metal. *(Continued on next page.)*

New York dairyman, Dave Chernoff, used hemlock poles in his new barn. Butts were treated as described in article.

The poles should be left in the solution until every cubic foot of wood to be treated has absorbed approximately 5 to 6 pints of the solution. Many will prefer to use a time schedule, even though it is not as satisfactory. In this event, the poles should be soaked in pentachlorophenol for 72 hours and in copper naphthenate 12 hours.

The use of green poles is to be discouraged unless they are naturally durable. However, many farmers who have suffered unforeseen loss of buildings may be forced by time and economic circumstances to use green, non-durable poles such as hemlock, beech, or maple cut from their own woods. Considerable protection can be given these poles by simple home treatment with water-borne preservatives. In many cases the life of pole will be extended three or four times.

Among the cheapest and best of these preservatives are copper sulphate (blue vitriol) and copperized chromated zinc chloride. A treating solution is made by dissolving the chemical in water at the rate of 1 pound per gallon. The peeled, green butts are then steeped in a tank of the solution, with enough additional solution being added to keep the level above the groundline on the poles.

After 1 gallon of the preservative has moved into every cubic foot of wood of the butt, the poles are treated. (Note: Copper sulphate is corrosive to metals and cannot be used in metal tanks or drums.) The cost per pound of treating material is small,—11 cents for copper sulphate, 20 cents for the chloride. Some of the proprietary water-soluble compounds may also be effectively applied in this manner.

### *Home treating techniques . . .*

Two preservative compounds in grease form have been developed as groundline applications for poles or other upright members. (2 feet below groundline to 1 foot or more above ground depending on the depth of litter accumulation.) These are very easy to apply and are consequently being rather widely used by those putting up pole structures. These two compounds have not been fully tested. Until further research shows otherwise, prospective users should realize that they are taking a risk when they apply them to poles which are expected to give long service.

One of these, pentagrease, is a mixture of 5 per cent pentachlorophenol in a grease. It is applied to the groundline area of peeled, seasoned poles with a stiff brush or spatula. The treated area is then wrapped in some form of grease and water-impervious material such as sheathing paper. Pentachlorophenol is an excellent wood preservative, but this new form has been produced only within the past year and has not yet been fully tested.

The other compound, Osmoplastic, is a mixture of the proprietary preservative Osmosalts in a coal tar base. It is applied in a similar manner but to green, freshly cut wood. Although this preservative has been in use for some time, service tests indicating its value have not covered a wide variety of species or climatic conditions.

#### Further Information

Those who are concerned with treating poles, posts, or wood for other purposes should seek more specific help from their Extension Forester, Agricultural College, or from the U. S. Forest Products Laboratory at Madison, Wisconsin. These sources will also be able to indicate where treating materials may be obtained.

**THE END**

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Reassemble unit and flush-rinse with very hot water. Then hang milk pail, pail head, and teat cups up to dry. Just before next milking, flush out milker with clear, hot water.

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# How To Get The Most For Your Grain Dollar

*by William G. Hawes*

THE recent increases in the price of grain have caused many dairymen to ask what can be done to hold or lower the feed cost of milk production. A good rule of thumb that has helped many dairymen lower their feed cost is "feed the best and cull the rest."

The first inclination which comes to mind when grain prices rise is to reduce the rate of grain feeding. This practice can be expected to reduce milk production if applied equally to all cows in the milking herd, and may cause an increase in the cost of milk production. It might be well to consider first what is the most efficient level of milk production.

Suppose a large size good producing cow is receiving 30 lbs. of digestible nutrients daily in her roughage and grain ration. When 10 lbs. of nutrients are required for daily maintenance of this cow, there remains 20 lbs., or two-thirds of her feed that is available for milk production. Now, should her feed be cut to a level of 20 lbs. digestible nutrients daily, and the same nutrients go for maintenance, there will be only 10 lbs., or one-half of her feed that is available for milk production.

### *High producers best feed converters . . .*

Further, suppose that this is a very high producing fresh cow and her level of feed is increased to 40 lbs. digestible nutrients daily. It follows that three-quarters of her feed intake is available for milk production, and only one-quarter is used up in maintenance. From this it can be concluded that cows on a high level of feeding with high production are the most efficient converters of feed into milk. Cows which will not respond to a high level of feeding, with correspondingly high production, are inefficient converters of feed into milk.

If it is not a profitable practice to reduce the rate of grain feeding for all cows in the milking herd, then can some cows be cut in grain feeding without a serious effect on the cost of milk production? And, would it pay to increase grain feeding to some cows in order to get higher, more efficient milk production? Let us try to find an answer to these questions by comparing the needs of your cows with the nutrients that they are receiving.

### *Needed—for maintenance . . .*

The daily maintenance requirement of a 1,050-pound cow is 8 lbs. digestible nutrients; a 1,400-pound cow requires 10 lbs. digestible nutrients daily. A growing heifer in milk should have the same nutrients for maintenance and growing as the full-grown cow she is expected to grow into. An extra four to six pounds of digestible nutrients per day are required for the last two-three months of pregnancy.

**. . . for milk production . . .**

In addition to the nutrients required for maintenance, an extra amount must be fed for milk production. Well bred dairy cows require three pounds of digestible nutrients for each ten pounds of low test milk, nine pounds of average test milk, or eight pounds of high test milk.

From this information it follows that a good size Jersey cow producing 40 lbs. of high test milk will require 8 + (5 x 3) or 23 lbs. of digestible nutrients per day. Similarly, a medium sized cow, due to freshen in three months, producing 18 lbs. of average test milk, will require 9 + 4 + (2 x 3) or 19 pounds of digestible nutrients per day. Now let's figure out what a good sized Holstein cow will require for 80 lbs. production of low test milk — 10 + (8 x 3) equals 34 lbs. digestible nutrients.

Now in order to compare your cows' needs for the most economical production with what they are receiving, the digestible nutrients in their feed can be found from the information in the following table:

Each ten pounds of the following roughages contain the following quantities of digestible nutrients.

| Quality of Roughage Fed | Lbs. Digestible Nutrients |
|---|---|
| Alfalfa or clover hay, early cut, bright color | 5½ |
| Mixed clover and grass hay, early cut, bright color | 5 |
| Mixed clover and grass hay, late cut or dark color | 4½ |
| Mostly grass hay, late cut and dark color | 4 |
| Clover and grass silage — very best — wilted and preserved | 2½ |
| Clover and grass silage, good quality | 2 |
| Corn silage, matured, well-eared | 2 |
| Corn silage, high yield, immatured variety | 1½ |

It requires 1 1/3 pounds of good dairy ration to furnish one pound of D. N. (digestible nutrients).

By determining the quantity of roughages being fed individual cows, the total D. N. received can be determined from the above table. The correct amount of grain is found by the differences between the cow's needs and what she gets from the roughage fed.

For example, if the first mentioned Jersey cow producing 40 lbs. of high test milk was getting 15 lbs. of mixed hay, dark color—(4½ x 1½ =6¾ lbs. D. N.) and 35 lbs. corn si-5¼ lbs. D. N.), she would receive a total of 2 lbs. D. N. from roughage. But we saw above she needs 23 lbs. for body maintenance and milk production. The remainder, 11 lbs. must come from grain.

This would require 11 x 1 1/3 = 14 ¾ lbs. grain to equal her maintenance and production needs—15 lbs. grain to give her a fair chance to increase production. Higher levels of grain feeding without correspondingly increased production would result in less efficient and more costly milk production. Feeding at a lower grain level can be expected to cause a cow to lose

weight and production until her D. N. requirement is balanced with what she is being fed.

### *Medium sized cow needs less . . .*

Let's next consider the medium sized cow producing 18 lbs. of average test milk that is receiving 20 lbs. of mixed hay, early cut, bright color—(5 x 2 = 10 lbs. D. N.) with 40 lbs. mixed clover silage, early cut, molasses added (2½ x 4 = 10 lbs. D. N.). The total of 20 lbs. D. N. in her roughages are sufficient to fill her needs (19 lbs. D. N.) for maintenance, pregnancy, and milk production. Any grain fed this cow along with the excellent quality roughage should be for improving the condition of the cow only.

Finally, let's work out the requirements of the Holstein cow that is producing 80 lbs. of low test milk which we determined needed 34 lbs. D. N. Suppose she eats daily 10 lbs. clover hay, early cut, bright color (5½ lbs. D. N.), 10 lbs., mostly grass hay, late cut (4 lbs. D. N.), 20 lbs. clover and grass silage, good quality (2 x 2 = 4 lbs. D. N.), and 20 lbs. corn silage, late maturing, poor-eared (1½ x 2 = 3 lbs. D. N.), or a total of 16½ lbs. D. N. from all her roughage. This leaves 34—16½ = 17½ lbs. D. N. to be supplied by grain, or 17 1/2 x 1 1/3 =23 1/3 lbs. dairy ration per day.

Most dairy farmers could profitably spend some part of one day per month during the barn feeding period figuring out the requirements of each cow or representative cows at each level of production. Members of cow test associations have available in their records both the feed quantities and milk production with which to determine the most efficient grain feeding level. It will pay every dairy farmer to weigh the milk from each cow and the roughage fed each cow once per month.

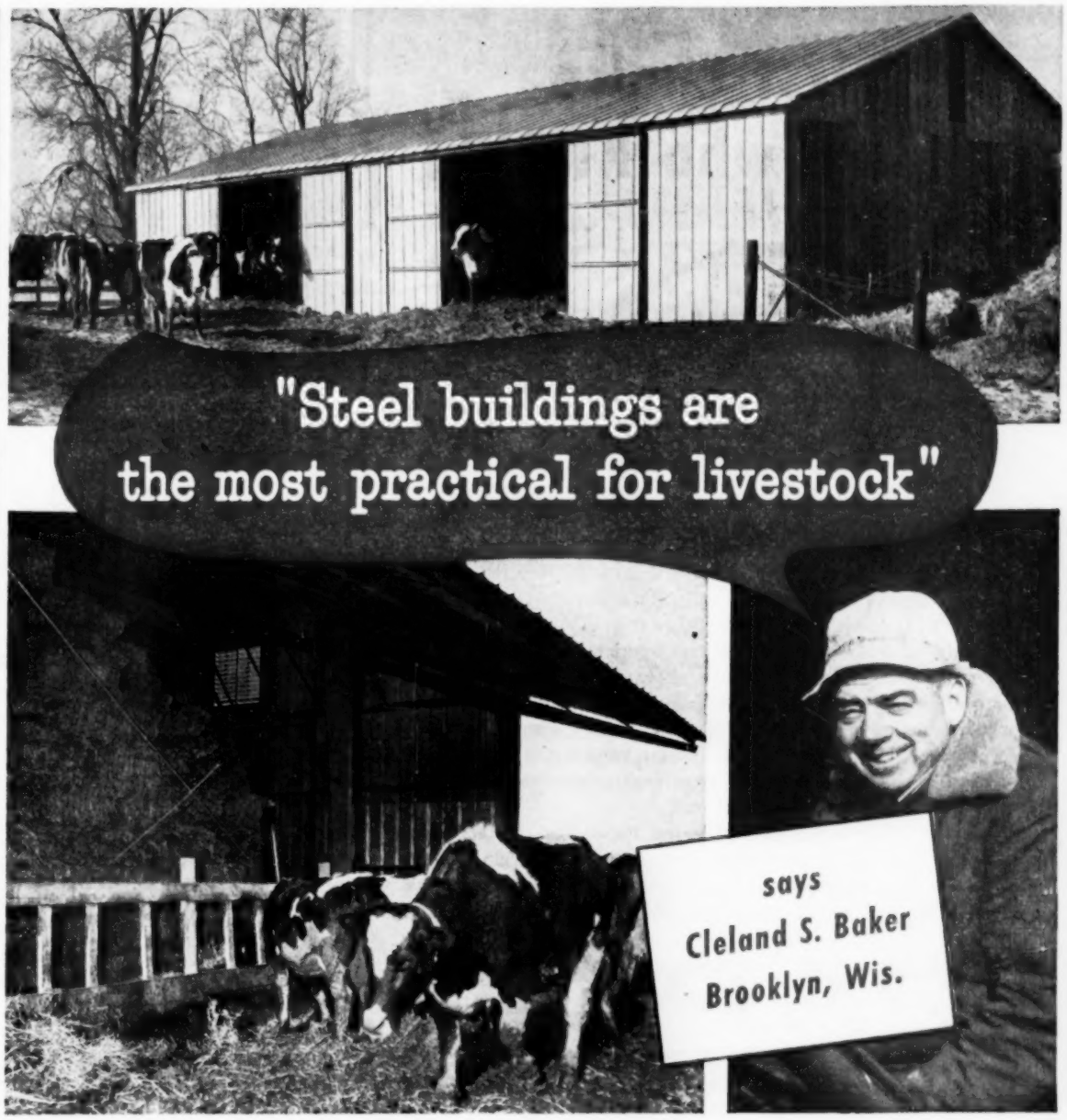
Examination of the charts showing the D. N. in 10 lbs. of various hays and silages shows marked differences between the best and the poorest quality roughages. The story of the differences in D. N. between roughages is only a part of the story. The early cut, bright color, high legume content hays and silages, contain almost double the digestible proteins, vitamins, and minerals as compared with the late cut, poor color, grass hays and silages.

### *Less grain with good roughage . . .*

Let's figure the grain requirements for the Holstein cow requiring 34 lbs. of D. N. on the basis of having all the high quality roughage she can eat. In place of the 20 lbs. of fair quality hay, let's assume she will eat 25 lbs. of clover hay, early cut, green color—(5½ x 2½ = 13¾ lbs. D. N.); with 25 lbs. clover and grass silage, early cut with preservative (2½ x 2½ = 6¼ lbs. D. N.); and 20 lbs. corn silage, matured, well eared (2 x 2 = 4 lbs. D. N.). The total D. N. from roughage is now 24 lbs. daily and the new requirement for grain is now only (34 minus 24 x 1 1/3), or 13 1/3 lbs. This is a saving of over 10 lbs. grain for this one cow per day.

Now there may not be much that can be done about this roughage situation except to give the best quality roughage available to the good producing cows, but every dairy farmer should plan to grow and harvest better quality roughage this spring and summer.

The most successful dairy farmers will reduce the grain required to balance the high production of their cows by growing top quality roughages and will feed each cow only that grain which is needed to furnish the nutrients required to meet her production.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- Tight-coated 16-gauge galvanized steel
- Sectionalized for economy.
- Truss construction, wide flange joint iron cemented to trough by 18 rivets
- Derrick constructed of all malleable castings for supreme safety
- Self-locking windless of malleable castings insures safety
- Adjustable head for bales or grain — Full 16 in. spout opening
- All drive sprockets Promal iron — lasts longer than cast iron
- All shafts set screwed and key wayed for perfect alignment
- Choice of extra low, extra wide feeders, chain, power.
- All welded sheet steel boot — prevents costly breakdowns

an "OTTAWA" costs you no more

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The "OTTAWA" Line

THE PIONEER LINE SINCE 1859

KING-HAMILTON CO., Ottawa, Ill.

Manufacturers of Portable Elevators, Cup Elevators, Corn Shellers, Hammermills, Running Gears and other farm equipment.

Wisconsin's "Alice in Dairyland," Marjean Czerwinski, distributes cheese sample to customer.

# Selling Cheese The Wisconsin Way

**Sales increased 44 per cent in Detroit as "Alice in Dairyland" worked with A & P Stores.**

A COMPLETE Wisconsin cheese campaign in the key markets of the United States through the use of "Alice in Dairyland" appearances and intensified promotional efforts has been outlined by the Wisconsin Department of Agriculture.

The first phase of the program will be carried out in the next three months, but Donald E. Wilkinson, marketing specialist for the State Department of Agriculture, said the campaigns eventually would become year 'round in scope.

The decision to embark on such an ambitious program was prompted by an experiment carried out in the Detroit area several weeks ago under the sponsorship of the State Department of Agriculture.

Wisconsin's famed first lady, "Alice in Dairyland," spent two days in Detroit as part of the Great Atlantic and Pacific chain's Wisconsin cheese observance. A description of her activities in Detroit, and the results gained, indicate the success of the project.

Newspaper advertising and publicity, television promotion, and a visit to Detroit's City Hall augmented the appearance of "Alice" in Detroit A & P stores.

### *Used top television program . . .*

The top television appearance of Wisconsin's lovely young envoy came on WWJ-TV's "Jean McBride Show," the highest-rated food program in a city with more than 700,000 TV sets. Miss McBride devoted her show to the use of cheese in recipes and accepted a gift package of Wisconsin's finest cheese from her young visitor.

The second television appearance came on a popular WJBK-TV variety show, "Meet the Ladies," on which "Alice" was introduced as the guest of honor and presented a gift box of cheese to the master of ceremonies.

Wisconsin's "Alice" also was interviewed by women's editors of three Detroit newspapers—all three papers with circulations of more than 400,000. Pictures of "Alice" with Wisconsin cheese were carried in the papers and "Alice" presented each of the food editors with gift cheese cartons.

At the City Hall, "Alice" again acted as the official representative of Wisconsin's great dairy industry as she presented gift cheese to Mayor Alfred E. Cobo and members of his official staff.

### *Posters, streamers and ads . . .*

In preparation for her visit, the Wisconsin Department of Agriculture had forwarded promotional material such as dairy posters and streamers to the stores, which cooperated fully in the promotion. A & P also ran large newspaper ads during the Wisconsin cheese observance, stressing the quality and economy of Wisconsin cheese items.

Wearing a colorful banner, which identified her as the representative of America's Dairyland, "Alice" was stationed in stores at cheese displays which were set up for the promotion. She distributed some 1,000 souvenir packages of Wisconsin cheese and emphasized the quality of Wisconsin's variety of cheese in her "sales talk" to each of the shoppers she met.

### *Sales up 20 tons . . .*

Results were amazing! In the two-week period, when A & P normally sells about 12,000 pounds of Wisconsin Cheddar, a total of 53,000 pounds —over 25 tons—of Wisconsin Cheddar were sold, representing sales four times over the normal period. Other Wisconsin varieties also showed substantial sales gains.

Those who worked with the promotion in Detroit agreed that the personal appearance of "Alice in Dairyland" played a very prominent role in the success of the promotion. Especially encouraging to the Wisconsin Department of Agriculture was the disclosure that cheese sales remained at a higher level following the special cheese observance than they had maintained prior to the promotion.

In view of that, the State Department's officials met with representatives of the cheese industry in Wisconsin and worked out a series of future campaigns even more complete than Detroit, which will take "Alice" to widely scattered markets.

In all future Wisconsin cheese campaigns in these key areas, sales figures will be carefully studied to determine the exact effectiveness of the trip to the Wisconsin dairy industry.

# One man's faith in Justice makes this date memorable...

## April 9, 1952

YEARS AGO a dream came true for Harry Ferguson. He obtained a patent on a device he had created—a hydraulic device that was to enable one man to do the work of many on the farms of America.

OTHER PATENTS were issued to this man, patents on devices that ended back-breaking farm tasks—that saved time and money. So good were these devices that eventually, by a handshake agreement, a large motor car company manufactured a tractor equipped with them. It was marketed as the Ford Tractor with Ferguson System, integrating tractor and implement into one efficient machine.

AS SOMETIMES HAPPENS, this arrangement terminated and Harry Ferguson, Inc. made and marketed its own tractor using the Ferguson System. The Ford Tractor continued to be made and sold, embodying some of the Ferguson patents and inventions.

THUS HARRY FERGUSON found himself in competition with his own creations. He believed deeply in justice and in the rightness of his claim against the Ford Motor Company. It was this man's faith in these things that found justification on this date . . .

## April 9, 1952

ON THIS DATE the United States District Court for the Southern District of New York entered a final judgment, with the consent of all parties which ended four years of litigation between Harry Ferguson, Inc. and Ford Motor Company and others.

IN THIS ACTION, it was ordered and adjudged that:

1. The sum of $9,250,000 shall be paid to Harry Ferguson, Inc. as royalties on Patents Nos. 1,916,945; 2,118,180; 2,223,002 and 2,486,257.

2. Ford Motor Company shall not manufacture, after December 31, 1952, such tractors, and Dearborn Motors Corporation shall not sell any such tractors manufactured after December 31, 1952, as have
(a) a pump having a valve on its suction side, as for example in the present Ford 8N tractor, arranged to be automatically controlled in accordance with the draft of an implement, or
(b) a pump for a hydraulically operated draft control system for implement control and a power take-off shaft both driven by the lay shaft of the transmission, as for example in the present Ford 8N tractor, or
(c) a coupling mechanism on the upper portion of the center housing, of the form employed in Ford 8N tractors manufactured prior to November 22, 1949; and Ford Motor Company and Dearborn Motors Corporation must affix a notice on any long coupling pins, manufactured by them, to the effect that the pin is sold only for replacement on 8N tractors made by Ford prior to November 22, 1949. This notice will continue to be affixed until October 25, 1966.

3. Ford Motor Company and Dearborn Motors Corporation shall have a period of time, expiring not later than December 31, 1952, in which to make these changes.

4. All other claims and counterclaims are dismissed and withdrawn on the merits.

A COPY OF THE CONSENT JUDGMENT is available to anyone interested in reading it. This settlement between Harry Ferguson, Inc. and the Ford Motor Company resolves the issues. The inventions in their entirety with which this action was concerned will be found only in the Ferguson Tractor and in the Ferguson System in the future.

*Harry Ferguson, Inc.*

Detroit 32, Michigan

# LENTOVET® WITH TUBEX® SYRINGE PAYS OFF BIG FOR CALIF. DAIRYMEN

NORWALK, CALIF.—This has been a rough year for animal diseases in California, as Johnny and Lee Nunes, dairymen here, will testify. Abnormal rains, wet fields, lots of mud . . . all have added to animal health problems of livestock ranchers.

"We've found that fast administration of penicillin pays off in many of the diseases and infections we've run into this year," both Johnny and Lee (shown above) say. The Nunes brothers milk around 255 cows on their ranch, mostly Holsteins. They say, "Wyeth's Lentovet (penicillin in handy Tubex cartridges) with the Tubex syringe has given us excellent results in treating hoof rot. Usually one or two shots of Lentovet are enough to show good results.

"We used to lose many cows because of retained afterbirth. Using Lentovet right after calving has helped prevent infection in most of these cases. Lentovet with the Tubex syringe is easy to use . . . our men on the ranch like it and all carry the equipment right in their pockets while working around the stock."

PENICILLIN EASY TO USE WITH TUBEX

This is the easy, modern way to use veterinary penicillin. No need to sterilize needle. Use Tubex to inject Lentovet, All-Purpose Lentovet or Lentovet-600 Suspension. All supplied in easy-to-use Tubex cartridges with sterile needle.

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# RAIN WHEN YOU WANT IT WITH SHUR-RANE
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SHUR-RANE* Portable Irrigation eliminates the borders and checks needed in other types of pasture irrigation. This means a big saving in labor cost and extra equipment. It increases the amount of productive land available. RESULT: MORE PROFITS

**Why SHUR-RANE* irrigation does a better job:**

- Self-locking latch speeds coupling and uncoupling; saves labor.
- Lip guide makes pipe inserting easy.
- No unlocking from pressure surges or line shocks.
- No welding or punching needed; coupler *clamps* to pipe.
- Gaskets leakproof under pressure.
- High grade, corrosion-resistant aluminum alloys used throughout.

**YOU'LL CUT COSTS. SAVE LABOR**

***Shur-Rane**** Portable Irrigation makes the most of every drop of water—saves time and labor. Whether it's coupling or uncoupling, lifting, or changing lines—every part is built for unmatched ease and handling speed *plus* unmatched durability.

SEE YOUR ***Shur-Rane**** Dealer. He's an expert, backed by the country's largest, most experienced irrigation engineering organization to solve your problems.

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fmc

# You Can Have SEASON LONG GRAZING

**How to beat the weather with cereal grains, sudan grass, silage, and aftermath grazing.**

*by C. M. Harrison*

THERE always seems to be too much pasture in the first part of the grazing season and too little in late summer and early fall. With winter and spring moisture, most pasture plants grow rapidly and abundantly. As the season progresses, many of these plants mature, dry up, and no longer produce green growth.

This short period of lush spring and early summer growth leads to faulty planning which generally results in poor summer pastures. A lot of this early growth is made at the expense of stored soil moisture. Once this is used up, the plants must get along on rainfall which is far less efficient in hot summer weather than it is in the cooler spring and early summer period. As a result we get two to three times the growth in the first six weeks of the growing season as we do all the rest of the grazing season combined.

Certain pasture plants such as bluegrass may stop growing entirely as the summer season approaches, particularly when rainfall is limited. Bluegrass should be used as efficiently as possible, however. In addition we can use more drought resistant plants and emergency crops to provide good pastures all season long. It takes planning.

### *Emergency pastures may help . .*

Cereal crops such as oats and barley may be a part of a season long pasture scheme. A shortage of pasture in early June may be bolstered up by using a previously planted oat or barley field.

Good productive animals may make better use of a grain field as pasture than as harvested grain. An acre of good oats or barley turned into just as it begins to head should carry a cow per acre for a month to six weeks. This may allow time for second cutting hayfields to grow into usable pasture areas.

Figure out how much milk per acre a cow giving 30-40 pounds of milk per day will produce and balance it against the anticipated grain yield.

It won't hurt the seeding to pasture the oats. This practice is particularly good where land is light and will not mature a grain crop without practically destroying the new seeding from lack of water.

Sudan grass planted at corn planting time at 20-25 pounds per acre on land well manured and suited to corn production, will produce pasture for 2-3 months in the period of summer when most pastures are short. With sudan grass, we delay the rapid use of stored moisture in early season and it is used by the sudan later. Sudan grows well in hot weather when sufficient moisture is available.

Don't plant sudan year after year on the same area. Rotate it from field to field and better results will follow. A half acre of sudan per cow is considered about right.

### *Undergrazing and overgrazing . .*

The regular pasture fields, properly managed will give better grazing results. Undergrazing of many permanent grass pastures results in a lot of dried up roughage which is unpalatable and non-nutritious for dairy cattle in the summer. If these pastures are not going to be productive after June 15 or July 1, plan to have most of the roughage eaten off by that time and then move the animals to more succulent forage.

On the other hand, we have mixtures such as alfalfa-brome and alfalfa-brome-ladino which will remain fairly green and productive even after maturity is reached. Undergrazing of this type of pasture in early season leaves a backlog of fairly productive forage for summer use. Overgrazing of this type tends to cut the production of pasture in the second crop season.

### *Use some surplus for silage . . .*

Even with the best of management, we frequently find a bad spot for pasture production in late August and September. Making some of the surplus first cutting forage into grass silage for use during this period is a good practice.

By cutting in the early bloom stage, an excellent roughage is made and stored for later use. This pickled pasture is far better than dry, unproductive pasture. By early cutting, a much more productive second cutting is possible which may be used for either pasture or hay as the occasion demands.

### *Change from one type pasture to another . . .*

As the season progresses, changing the livestock from one kind of a pasture to another is good practice. Using rye, then bluegrass, followed by oats and then a second cutting hayfield, may result in continued high production, whereas the use of any one of the crops all season long would be impossible.

Don't wait until milk production has slipped badly before switching.

Various combinations are possible such as the one above. Alfalfa-brome first, followed by sudan or the second cutting of a hayfield is another.

# Here is a Simple Test For Grass Silage

**All you need is sample of chopped hay crop silage, a small board, piece of facial tissue, and your weight.**

*by S. T. Dexter*

SILAGE should be wet enough to pack well, to prevent heating and growth of molds, but yet not so wet that the weight of the silage will squeeze juice from it. It is evident that the pressure from a 30-foot column of silage would be more effective than that from a 10-foot column in squeezing juice from silage.

Since the weight of a cubic foot of packed silage is about 48 pounds, one can easily compute that the pressure at the bottom of a given depth of silage will be about one-third pound per square inch for each foot of depth. Thus, under 30 feet of silage the squeezing pressure is about 10 pounds per square inch; or 15 pounds under 45 feet; or 5 pounds per square inch under 15 feet of silage.

In making the standardized pressure test, pressures are used equal to those to which the silage will be exposed under your own conditions. If you are making silage that will be at a depth of 15 feet, you would use a pressure of 5 pounds per square inch to test it, but you would use a pressure of 10 pounds per square inch if the silage will be exposed to that pressure.

In order to get these pressures easily, you can use your own weight by standing on a small board, or block, cut to the proper dimension. For example, if you want 10 pounds per square inch, and you weigh 180 pounds, you will need a piece of board with an area of 18 square inches, — say 4x4½ inches. If you want 15 pounds per square inch, then 180 divided by 15 gives 12 square inches, or a board 4 x 3 inches. The table gives suggested dimensions of pressure blocks for men of various weights and silages of various depths.

To make the test, run a bushel or two of the forage through the chopper. Spread out a firm, smooth layer of the chopped forage about three inches deep and a foot across. Lay a piece of facial tissue paper on the chopped forage and cover with another smooth layer of chopped forage. Place the pressure block on top of the pile and stand on it for 60 seconds. Then examine the tissue paper for juice. It is evident that with very dry forage the paper will be completely dry and that it will be dripping wet if the forage is excessively wet.

If more than about 25% of the tissue paper is wet, the silage is too wet. If there are no damp spots, the silage is too dry for your conditions.

Author demonstrating application of his test for moisture content of grass silage.

| Depth of silage in feet | Pressure per square inch | Dimensions of Pressure Blocks — Weight of Man | | | | |
|---|---|---|---|---|---|---|
| | | 140 | 160 | 180 | 200 | 220 |
| 15 | 5 | 4x7 | 5x6 | 6x6 | 5x8 | 6x7 |
| 30 | 10 | 4x3½ | 3x5 | 4x4½ | 4x5 | 4x5½ |
| 45 | 15 | 3x3 | 3x3½ | 3x4 | 3x4½ | 3x5 |

## No Benefit From Tedding Hay

Tedding hay tends to slow the drying time when the soil is dry, has no effect on normal soil, and possibly hastens drying when the soil is wet. These are the findings reported by Wisconsin research workers who have studied the effects of tedding or fluffing up the hay cut by either a mower or a mower crusher.

Twenty-two 100-foot swaths of grass-legume hay were cut in three fields. Some swaths were tedded twice, some only once, and some not at all. The workers kept careful weather records and decided that the experiments were conducted under normal Wisconsin weather conditions.

One test was conducted under moderate temperatures with very dry soil and low humidity. It was hot and rained during the second test, and the third test was made on a hot day with high humidity and the soil about normal in moisture.

Crushing shortened the drying time an average of one hour and 38 minutes for all trials.

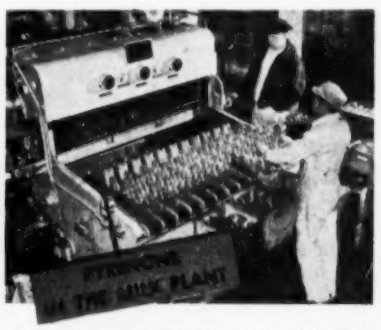
In either method of cutting, tedding was of no benefit in this series of tests. The workers don't know whether tedding actually slowed the drying time in some of the cases, or whether it caused loss of leaves. Since leaves are lower in moisture than the stems, a loss of leaves would cause a higher moisture test.


# All along the "Milk Route" Pyrenone* Protects against Insects

OF THE MANY INSECTICIDE chemicals available, Pyrenone is one of the very limited group recommended for use on the cow and is the only one effective on tabanids (horseflies).

SURFACE TREATMENTS with Pyrenone sprays are generally used on places that are most favorable to flies for the quick knockdown and kill that Pyrenone gives.

The freedom from toxic hazards, plus the quick knockdown that Pyrenone gives, make it a preferred insecticide for use in premises where milk is handled and cooled.




Wherever milk products are processed, bottled, packaged or stored, Pyrenone gives effective control of a wide range of insects — yet without hazards to either employees or products.

**FROM FARM TO FAMILY,** Pyrenone-type insecticides are relied upon for effective economical pest control — free from hazards. That's because all kinds of insecticides are available to meet the specalized needs of the places where milk is produced and handled. There are oil-type sprays, aerosols, emulsifiable sprays and insecticide dusts and powders. Because Pyrenone is effective against *all* species of flies without exposing yourself, your animals, or milk products to hazardous residues, Pyrenone is rapidly winning preference as the answer to the milk industry's need.

Also effective on a wide range of other insect pests, such as roaches, silverfish, weevils, etc., Pyrenone-type insecticides are the most logical candidates for use all along the route traveled by milk and milk products from farm to family. Every step of the way requires good sanitation and Pyrenone helps sanitation with a quick knockdown and kill of insects which are present.

Make sure the insecticides you use are based on Pyrenone — look for the name Pyrenone on the label. It means an exceptional combination of the factors most important in the dairy industry — effective, economical, free from hazards.

# Pyrenone*

*Pyrenone is a registered trade mark of U. S. Industrial Chemicals Co.
Division of National Distillers Products Corporation
120 Broadway, New York 5, N. Y.

# EDITORIAL COMMENT

## IS THIS DISEASE CONTROL?

BACK in the year 1903, the Congress of the United States passed an act which stated, in part: "He (the Secretary of Agriculture) is hereby authorized and directed from time to time to establish such laws and regulations concerning the exportation and transportation of livestock from any place within the United States where he may have reason to believe such diseases (dangerous, contagious, infectious, and communicable diseases in cattle and other livestock) may exist . . ."

Through the years the Secretary of Agriculture has not followed the authorization and specific directive of Congress insofar as brucellosis (Bang's disease) is concerned. In failing to do so, he has penalized those who have been willing to bear the torch of eliminating a disease which strikes at farm profits, the food supply, and public health.

According to information we have received, however, if the Secretary of Agriculture had declared brucellosis to be a contagious disease, it would have prohibited automatically the interstate shipment of any livestock reacting to the blood test. This would mean, of course, that even animals being shipped to stockyards could not move interstate.

Because of the obvious injustices which would arise from such action, the Secretary has asked for specific legislation to permit the interstate shipment of reactor cattle to market points. He has also asked for the authority to reship valuable breeding animals to the original owner if these animals subsequently are found to be infected after moving interstate.

Senate bill 1629 was passed by the Congress last fall. Section 13 reads, in part, as follows:

"Domestic animals . . . which, never having been vaccinated for brucellosis, have reacted to a test recognized by the Secretary of Agriculture for brucellosis, may be shipped, transported, or otherwise moved . . . for immediate slaughter in accordance with such rules and regulations as the Secretary of Agriculture may prescribe to prevent the dissemination of said diseases . . . The Secretary of Agriculture may, in his discretion and under such rules and regulations as he may prescribe, permit domestic animals which have been moved . . . for breeding purposes, and which, subsequent to such movement, have reacted to a test for brucellosis . . . to be reshipped in interstate commerce to the original owner at the point of origin."

Now comes the next and most recent development in the 49-year effort to carry out the obvious intent of Congress. In the federal register of March 26, 1952, the Secretary of Agriculture publishes a proposed amendment to the Department of Agriculture regulations governing the interstate transportation of diseased cattle. The amendment, in brief, states that unvaccinated animals, which have reacted to a test for brucellosis, may be shipped interstate for immediate slaughter.

*Nowhere in the amendment to the regulation does it state, however, that an animal must be tested before it can be moved interstate.*

The obvious loophole for the intentional purveyor of diseased cattle is simply not to test the animals at all. Since they have not been tested, they cannot have reacted. The peddler is scot-free insofar as the federal government's regulation is concerned.

We know that the dairy farm and breed organizations representatives, testifying in behalf of Senate bill 1629, never dreamed that such a weak, ineffective regulation would be written by the Department of Agriculture. They appeared in behalf of S. 1629 in good faith and with the full understanding that, at long last, the Department of Agriculture had an opportunity to stop, interstate at least, the spread of a very costly, profit-robbing disease. If this regulation is allowed to stand and no further action is taken, we are no further ahead today than we were one year ago.

Fortunately, the effect of this regulation is delayed until May 15 or shortly thereafter. All persons who desire to submit written data, views, or arguments regarding the regulation may do so by filing them with the Chief of the Bureau of Animal Industry, Agricultural Research Administration, U. S. Department of Agriculture, Washington 25, D. C. Your letters or telegrams should be delivered by May 15, however. We encourage dairy farmers and their farm and breed organizations to make their opinions known. Copies of your letters should go to your congressman and U. S. senators.

Certainly we are under no obligation whatsoever to those peddlers of diseased cattle who profit at our expense in their conduct of what is realistic, domestic bacteriological warfare. It shouldn't take much courage to put that opinion in writing. The Department of Agriculture should have the courage to recognize the desires of the dairy and livestock industry and write an effective departmental regulation.

## THE TIDE TURNS

DURING the past three years the price of milk has not kept pace with some other forms of farm income. In many areas there have been dairymen who have looked over the fence, saw what they thought was greener grass, and broke through to it.

We have advised dairy farmers with good herds to sit tight, cull low producers and diseased cattle, and weather out this somewhat unfavorable period. With beef prices as high as they were, there was no better time to sell cull cows and diseased animals with little or no loss in income.

It would appear that the tide has finally turned. In March, dairy farmers received $4.92 per hundredweight for milk sold to plants and dealers, the equivalent of 103 per cent of parity. This compares to $4.54 in March of 1951. The March price for butterfat was 77.8 cents per pound, or 100 per cent of parity compared to 69.7 cents in March last year.

Of equal significance is a further decline of 1 per cent in number of milk cows in the United States during 1951. Meanwhile, since 1949, the number of beef cows has increased 29 per cent.

With a high national income, fewer—but better—cows, and increasing prices, it does appear as though we have had a nice, warm spring shower on the dairy side of the fence. The pasture on the next farm is beginning to look a bit dry.

## ANNOUNCING A NEW SERVICE

OUR readers will find a new and valuable feature beginning in this issue on page 411. WASHINGTON DAIRYGRAMS brings dairy farmers the only direct Washington report written especially for men who milk cows.

Because of our late closing date, WASHINGTON DAIRYGRAMS will always be current, fresh from the halls of Congress, the Department of Agriculture, and other vital news centers in the nation's capitol.

We are particularly pleased to announce this latest service to Hoard's Dairyman readers. It has been in the planning stage for several months. We did not wish to begin it, however, until we had secured the services of the most competent and well informed **dairyman** available to report Washington events. As a result, our readers will receive information that will not be found in any other Washington column. WASHINGTON DAIRYGRAMS is exclusive with Hoard's Dairyman. The column is not and will not be syndicated. It is yours and yours alone. We hope that this new service will make Hoard's Dairyman of even greater value to you in your business of dairy farming. .

## VALUE OF INSECURITY

OUR nation has grown strong on insecurity. Ask the shades of our early settlers what they knew of security.

Our greatest businesses and institutions, however strong, cannot sit back and feel secure. To do so would be the beginning of their downfall.

An individual can never be secure. Large fortunes can be lost as well as small ones. Security is a mirage, though there is, of course, the comparative security of the jail.

We do not grow on security, but on insecurity. It is the desire to make ourselves as free and independent as possible that has fired imagination, developed initiative, made us eager to work, and encouraged us to save.

Our resources did not do it. They merely helped. All wealth is in the ground, and ours could still be there if we hadn't been willing to work and dig it up.

There is no security in life, but its nearest approach is the fear of insecurity. From it we derive our ambitions, our motive power, and our strength. It is the eternal quest for freedom and independence that is the glory of the American system.

That has made us the most prosperous nation in the world and our way of life the best yet found. Let those who complain of it point to a better one.

Be it nations, businesses, or individuals, those who look to others for their security are chasing rainbows. They will find not freedom but slavery.

Whatever of security there is lies only in ourselves.

—Courtesy of the Butter, Cheese, and Milk Products Journal

***In 1902, W. D. Hoard said:***

THE dairy product of the United States is sufficient to pay off the national debt in two years. As a mortgage lifter, the cow has performed wonders in the West and if Uncle Sam ever gets in a tight place he can call on her.

## Questions From Our Readers

### Telling Age of Cattle by Teeth

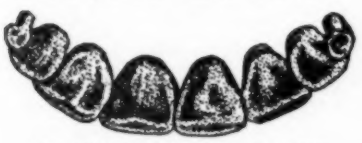
From time to time we receive inquiries from readers requesting information on how the age of cattle can be determined by the teeth.

The following illustrations, reproduced from Farmers' Bulletin 1066, will show you how to determine whether an animal is two years of age, four years of age, 12 years of age, etc.

Internal face of incisors of calf.

Internal face of incisors at 2 years.

Internal face of incisors at 3 years.



Internal face of incisors at 4 years.

Internal face of incisors at 5 years.

Internal face of incisors at 12 years.

The age of cattle can be approximated closely by the appearance, development, and subsequent wear of their second incisor teeth. Cattle have eight incisor teeth, all in the lower jaw. In the calf at birth two or more of the temporary or first incisor teeth are present. With the first month the entire eight incisors have appeared.

As the animal approaches two years of age, the center pair of temporary incisor teeth or pinchers are replaced by the permanent pinchers which at two years attain full development.

At from two and one-half to three years the permanent first intermediates are cut and are usually fully developed at three years.

At four and one-half to five years the corner teeth are replaced, the animal at five years having the full complement of incisors with the corners fully developed.

At five to six years there is a leveling of the permanent pinchers, the pinchers usually being leveled at six and both pairs of intermediates partially leveled and the corner incisors showing wear.

From seven to eight years the pinchers are noticeably worn; from eight to nine the middle pairs, and by ten years the corner teeth.

After six years the arch gradually loses its rounded contour and becomes nearly straight by the twelfth year. In the meantime the teeth have gradually become triangular in shape, distinctly separated and show the progressive wearing to stubs.

### Wet Brewers Grain for Cows

**Could you tell me what the feeding value is of wet brewers grains that come from the processing of beer? It is a sloppy grain. Does it have enough feeding value to cut down on the regular grain mixture? Would it be all right for calves?**

**Ohio** **J. W. S.**

Wet brewers grains contain approximately 4.2% digestible protein and 16.1% total digestible nutrients. When available, wet brewers grains are an excellent feed for dairy cattle when fed to replace silage or part of the concentrate mixture.

You can feed from 20 to 30 pounds per head daily to replace an equal weight of silage, or 4 pounds of the wet brewers grains will replace one pound of the concentrate mixture.

We would not recommend feeding wet brewers grains to calves, particularly small calves, but neither would we recommend feeding silage to small calves.

It should be emphasized that wet brewers grains can taint the milk if fed before milking, so it is important that they be fed after milking.

They do spoil rather easily, so you should plan to haul them from the brewery rather frequently during the warm months and about twice a week during the wintertime.

### Ear Notching Cattle

**As we have cattle to send out to pasture, am interested in branding or tattooing them. Can you give me information along that line.**

**Minnesota** **C. O.**

In checking with a number of farmers in Green County, Wisconsin, we find they are using an ear notcher, used in notching baby pigs at birth, on the cattle before putting them out to pasture. This small V-shaped notch on the underside of the ear is positive identification and yet does not spoil the looks of the heifer's ear.

By ear notching a group of young heifers while they are still in the barn, these farmers find it to be a very easy task plus a positive mark for identification next fall when these heifers are sorted out to be brought back to the barn.

### To Depreciate Cows

**If a farmer purchases cows during the year 1951; say, two in June 1951, may he take out depreciation on report of 1951 income tax, or must the cows be kept a year for depreciation and reported in 1952?**

**New York** **L. K.**

You should start to recover the purchase price of a cow the same year you made the purchase, but only for the proportionate share of the tax year.

Let's assume you paid $600 for the two cows in June. If you estimate the useful life as six years, you would recover $100 if held a year, but inasmuch as you had them only seven months, you would take a depreciation of 7/12 of $100, or $58.33. Then the next year you would take the full $100. —I. F. HALL.

"Whistling" fence stays tight for more than 40 years

**COLONEL D. M. VANCE** of Monmouth, Ill., owns a 320-acre farm that has been in the family since the "Forty-niners" were heading west in search of gold.

"I remember when my father put in the first American Fence on this farm," said Colonel Vance. "It was over 40 years ago. He stretched the fence tight enough to hold its tension all these years. We called it our musical fence because the posts were tubular steel posts and whistled in a high wind. We finally stuck corn cobs in the holes to stop the whistles.

"Since then we've put in over 2800 rods of American Fence and in my opinion, it's the finest you can get. We've never had to make any repairs except a few minor adjustments on the posts. The original fence is still tight after all these years and has a lot of service left in it."

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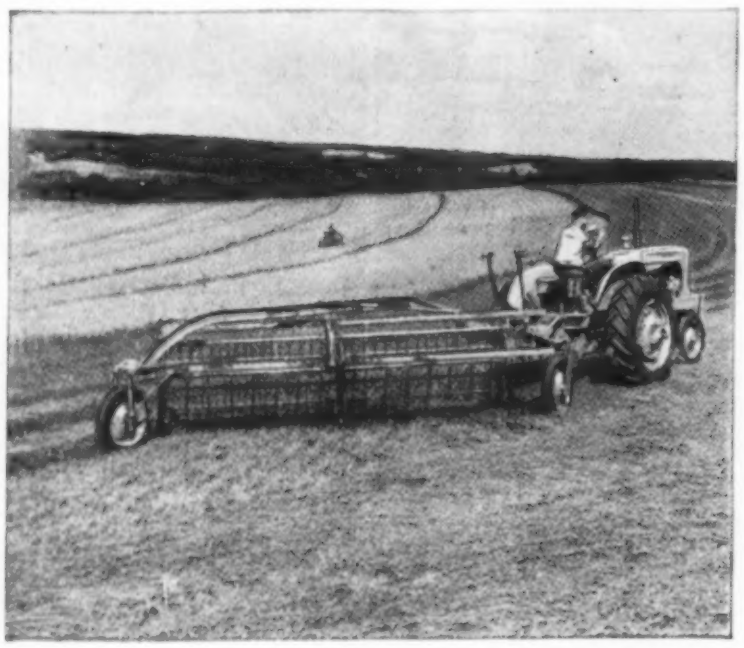

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You've waited for the day when you could make hay like this. Now you can have closer control over leafiness, color and curing time . . . with a *speed-selector* rake.

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*Here's the way to quick-cure damp hay. Tedding with Allis-Chalmers Power Rake in reverse gear lifts hay gently from swath or windrow. Rake teeth can be reverse-angled to comb hay out of the wet stubble and move it over to dry ground.*

ALLIS-CHALMERS
TRACTOR DIVISION • MILWAUKEE 1, U. S. A.


# Ups And Downs Of Testing

**Don't be discouraged if your herd average drops. It happens in other herds, too.**

*by C. W. Nibler*

IN THE last 25 years cows enrolled in dairy herd improvement associations have increased their production twice as fast as have other milk cows in the United States.

In 1926 the average cow in dairy herd improvement associations produced 290 lbs. fat, while this cow in 1950 produced 370 lbs. fat. This is an increase of 80 lbs. fat per cow or an increase of about 3 lbs. per cow annually.

During the same period the average cow in the United States increased in butterfat production from 172 lbs. to 210 lbs. This is an increase of 38 lbs. over the same period. While the average DHIA cow was showing such an increase in production, there were more cows being tested every year. In 1926 there were one-third of a million cows on test and in 1950 over one million.

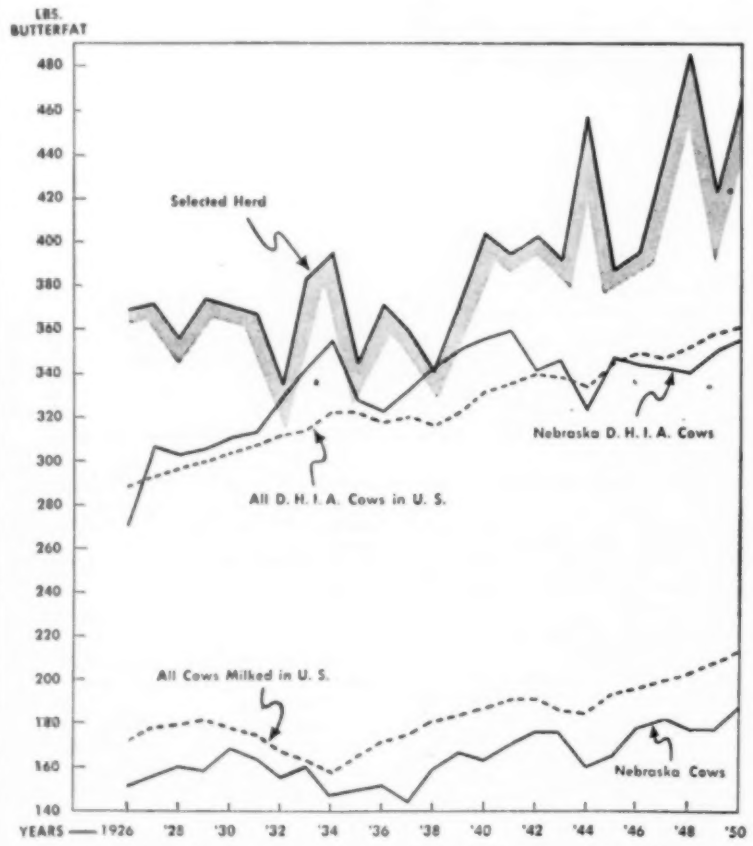
The upward trend in production rises and falls from year to year and does not increase in one straight line. There is more variation in yearly production where a limited number of cows are milked, like in Nebraska, than in the United States. The increase in production per cow for all Nebraska cows and for DHIA cows parallel the increase of U. S. cows, but with not the same regularity. For individual herds that have tested continuously in dairy herd improvement associations, the ups and downs of production are more pronounced than for large groups.

The herd of F. A. and Paul Swanson, Nebraska, shows definitely that what they gain in production one year can be partially lost the following. Twenty-five years ago the average production in this herd was 370 lbs. fat, while in 1950 the average production per cow was 466 lbs. fat. This has not been a large herd; but good breeding, feeding, and management practices have been followed consistently.

The point which is important is that the increase in production for this herd is typical of many herds because the production was increased over a period of years in an undulating way. This fact is brought out here to encourage the breeder who may be disappointed if his DHIA herd average does not increase every year.

Let us take the ten-year period from 1941 to 1950 when production was increased from 396 to 466 lbs. fat to observe more closely how production went up and down during the ten-year period.

| Year | Lbs. Fat | Year | Lbs. Fat |
|---|---|---|---|
| 1941 | 396 | 1946 | 396 |
| 1942 | 403 | 1947 | 443 |
| 1943 | 391 | 1948 | 484 |
| 1944 | 454 | 1949 | 422 |
| 1945 | 387 | 1950 | 466 |




Average fat production per cow for a period of 25 years (1926-1950) for all cows milked in U. S., enrolled in DHIAs, Nebraska milk cows, and those enrolled in DHIAs, and for one selected herd of about 15 cows.

# Wacky Actions Stump Man From Mars

by Benson M. Jewell

THE man from Mars — call him Decimus Ultimus (which means tenth and last; when his mother saw him she didn't want any more) — put on his invisible cape and stepped into Mr. A. Certain American's kitchen on earth.

'Twas early morning, the alarm had just rung for the third time, and now here came A. C. He had a cigarette in his mouth (advertising expenditures last year to sell it to him, about $35,700,000), preferring to start his nicotine intake early. Requiring caffeine as well, he put on the coffee (advertising expenditures last year to sell it to him, about $16,400,000) and slipped a slice of bread in the toaster. When it popped out he put oleo on it to save on butter which would have cost just 1¢ instead of the ½¢ for oleo; tasted better and given him a needed protein element in his breakfast —but the $516,500 spent to sell him butter last year had not been enough and he had fallen instead for the $6,600,000 advertising of oleo. He had his coffee black, to save on cream, put another cigarette in his mouth and dashed out of the door.

When A. C.'s family came in for breakfast, they had about the same as A. C., except that the kids did get milk — small glasses because milk is so expensive (cost about 6¢ for a nice big glass.) Of course the beer that A. C. had after work, plus the pop the kids had after school, would have bought a lot of packed-with-energy milk. The trouble was that the $2,400,000 worth of advertising spent to sell them milk did not make much of an impression against the $17,600,000 spent to sell them beer and the $12,200,000 spent to sell them sugar-water.

After observing many more things of this kind during the day, Decimus Ultimus came to the conclusion that, since A. C. and his family were willing to spend more for cigarettes, pop, beer, etc., than for good food, they were pretty wacky people. He did not understand the power of advertising. (We might add that Mrs. A. C. did not know what to conclude because the children were not looking so well, and A. C. was very grouchy and not feeling well either — and she couldn't figure out why.)

You can help all the A. C.'s in the world — and sell more milk —by joining the American Dairy Association set-aside. Let's let A. C. know about, and want to buy, really good food.

## Plant Food Key to Good Pasture

Successful pasture improvement is possible only when the farmer sees to it that the soil has plenty of plant food in it.

A good grass-legume mixture should last nine or 10 years before it has to be plowed up and reseeded if it is started right and given annual applications of fertilizer. The legumes will probably disappear in six or seven years but the grass should last an additional three or more.

Studies conducted at the Dairy Research Farm in Sussex County, New Jersey, lead to the following recommendations:

1. For high yields and a long life of the hay mixture, 500 to 1,000 pounds of a 5-10-10 fertilizer mixture should be worked into the soil prior to making new seedings. Plowing under 15-20 tons of barnyard manure per acre is good, too, in addition to the commercial fertilizer.

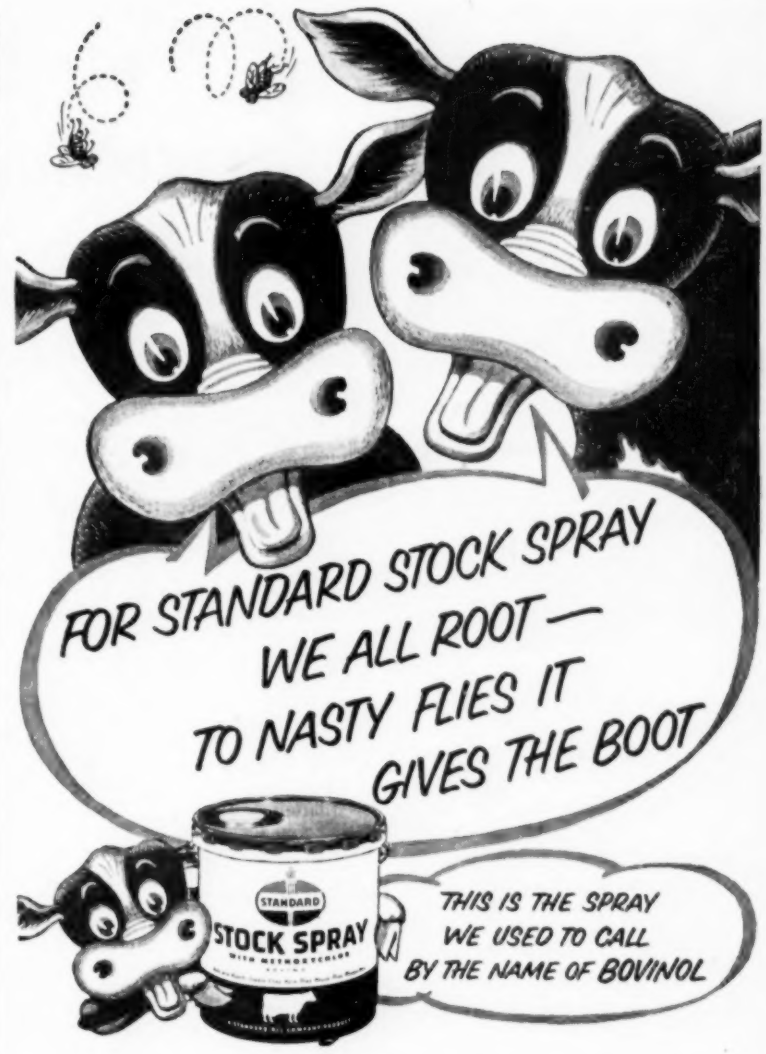
2. Annual fertilizer applications with limited manuring following the year of seeding seem to give the best results. Manure applied at the rate of six tons per acre and 500-800 pounds of 5-10-10 will usually maintain a grass-legume mixture for six or seven years.

3. When the legumes have disappeared from the stand, use 500 pounds of a 10-10-10 fertilizer which should prolong the grass for another three or more years.

4. On very heavy legume stands annual applications of 500 to 800 pounds of a 0-12-24 mixture may be used.

5. Fertilizer may be applied in mid-November, late March, or after the first cutting.

This type of fertilization not only helps to maintain the stand for long periods, but produces consistently good yields. If a drouth occurs during the spring growing season and the first cutting is short, rains in midsummer will produce good second and third growths. In 20 years the New Jersey Agricultural Experiment Station has not had a hay crop failure at Sussex because of the weather, for with plenty of plant nutrients at the roots the grasses and legumes soon spring to life, yielding, on the average, 12 tons of green weight per acre in two cuttings.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# Pit Silos Have Advantages

**First cost is low . . . permanent if properly built . . . little or no freezing of silage.**

*by J. R. Blackburn*

THE pit silo is a cylindrical hole excavated in the ground to any feasible depth and of sufficient diameter to meet the individual needs, thus resembling a giant dug well.

From personal experience and observation, and from the experience of other users, the pit silo has much to recommend it. The first cost is much less than the standard upright silo. If properly constructed, it is permanent. There is little or no freezing, the temperature being very uniform on the sides when filled, regardless of the season. Since no air can enter through the walls, the contents keep very well. With proper planning, the labor involved in filling and feeding is no greater than in an upright silo.

### *Soil needs to be well drained . . .*

It is recognized that the pit silo is mainly adapted only to areas where the soil substrata is well drained with ground water, preferably, not less than fifteen feet below the surface. However, it is conceivable that with proper care in constructing waterproof walls, it might be used in less well drained locations. I have yet to learn of a dissatisfied user of a pit silo.

Several labor saving methods of removing the contents of pit silos have been used. The most efficient ones observed have been large buckets with a hinged bottom. Both iron and wood buckets have been used. A hay or litter carrier is installed over the top for elevating and conveying the contents. A horse or tractor to pull the rope is common.

One farmer's son, who was very much mechanically inclined, built a very efficient device from the rear end of a salvaged auto, a capstan around which the rope was wound, and an electric motor. The silo was at the end of the barn, near the feed alley. The track extended across the silo and into the feed alley.

One-half of an iron hogshead with a hinged bottom was lowered into the pit at feeding time, the operator climbed down a ladder, filled the bucket, climbed out, threw the switch, then went on about other chores. When the bucket reached its destination in the feed alley, another switch was automatically thrown, stopping the bucket where the contents were conveniently fed.

Where a track is to be used, it should be installed before digging has progressed very far. It can then be used for hoisting, during digging.

### *Wide choice in materials for lining . . .*

Different materials have been used for lining the walls. Brick, laid up as in a well curbing and plastered with rich cement mortar, have been satisfactory. Salvaged brick can be used. A form for pouring a monolithic wall is also good.

In many places it is possible to apply cement plaster to cylindrical earthen walls with satisfactory results. If this method is used, it is suggested that before plastering, netting be attached to the earth walls by inserting long wire staples. It would facilitate the plastering if it were applied in sections as the digging progressed. Then no staging is required.

Where cylindrical earth walls are subject to caving, even brick or concrete walls should be built in sections. Each section might be excavated, progressing downward, as much less in diameter as the thickness of two walls.

By sloping the top of each section inward, trouble with air pockets can be eliminated. Some soils are stable enough that even plastering is not required, except, that if rodents get into the silo they dig into the walls, and if rain beats against earth walls they are eroded, making them rough.

In porous soils, if the floor is left unfinished, seepage is taken care of. However, the water supply might be contaminated.

### *Need concrete wall at top . . .*

In all cases a concrete wall at the top, extending several feet above ground and below frost line, should be built, preferably before digging has progressed very far. A pit silo with a roof has never been observed, but a roof or shed over the top might well be considered. Otherwise, unless the wall is high enough to prevent animals from falling in, the area should be fenced.

The greatest objection to pit silos is the labor of digging. Often, farmers might find it possible to do the digging with the normal farm help and equipment during slack times. It should be possible to develop a machine to loosen the dirt and elevate it out. With a machine, custom operators might well find the construction of pit silos profitable.

It would seem that many farmers contemplating the construction of a silo, might well give serious consideration to a pit silo.

**"It was nice talking to you, Myrna—Oh, not at all, Daddy was going to get up in another hour anyway to milk the cows."**

USE DENNING PRE-FAB SILOS for LOW-COST GRASS or CORN SILAGE

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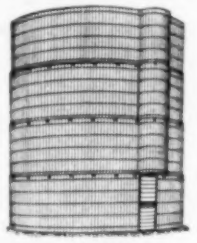

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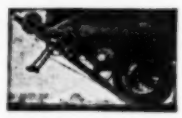

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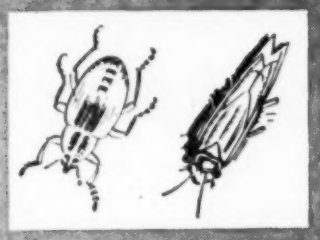

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150th Anniversary
BETTER THINGS FOR BETTER LIVING
. . . THROUGH CHEMISTRY

# The Judging Contest Winners

(Continued from page 417)

the National Junior Jersey Show and all three placed in the money. "Trinket" calved again this past January so James now has four head.

In addition to his showing record, James has been high in the money in the showmanship contest at the two past National Junior Jersey Shows and is currently president of the Starkville Junior 4-H club, on the county 4-H council, and a member of the Oktibbeha 4-H junior dairy judging team.

Third place in the family division was won by the Joseph B. Easterwood family, Malone, Ala., while the following families receive honorable mention: Jake Frihauf, Wiggins, Colo.; Harold Kaeser, Columbus, Ohio; Ora Millin, Bagley, Wis.; Ed Hassevoort, Hudsonville, Mich.; Wm. M. Hopper, Lexington, Ky.; Lee Pressly, Lee's Summit, Mo.; Mrs. Barbara O'Neil, Kingston, Mass.; and Walter S. Richards, Bowling Green, Ky.

### Vo-Ag Winner From Washington

With a perfect score of 500, Roland C. Hintze, vocational agriculture instructor from Lake Stevens, Wash., was undisputed winner of first place in the vo-ag division. As was mentioned earlier, Hintze won second place in the senior division.

There was a two-way tie for second place, with Duane Miller, Paullina, Ia., having a higher reason score than J. H. Gnos, Poulsbo, Wash., third place winner. Honorable mention include: Paul N. Stevenson, Hopkins, Mo.; W. Sommer, New Carlisle, Ind.; Edward W. Gills, Atascadero, Calif.; Devere Gerwick, Seward, Nebr.; J. C. Miller, Choteau, Okla.; and C. R. Hall, Watertown, S. Dak.

### Thorp High Wins Again

For the second time in five years the vocational agriculture class from Thorp, Wisconsin, coached by Roy A. Swanson, won first place in the high school division. With an average score of 481.4, this team topped 1,500 high schools from every state in the Union. One of the most enthusiastic followers of the annual judging contest, Mr. Swanson's vocational agriculture class has participated in sixteen consecutive contests. In addition to winning first in 1947, he coached the third place team in 1938, second place in 1940, and fifth place in 1944. He reports that he has copies of all previous contests on file and finds them most valuable in his judging work.

Second place was won by Nevada F. F. A., Nevada, Mo., coached by A. L. Mahoffey, followed by Marked Tree High School, Ark., Oscar B. Holt; Marathon High School, N. Y., L. E. Harvey; Pettisville High School, Ohio; Cabool High School, Mo.; Atascadero High School, Calif., E. W. Gills; Rocksprings High School, Texas, J. E. Tatum; Shamrock High School, Texas, H. C. Weatherby; and Lodi Union High School, Calif.

### Kansas State Top College

Competition was especially keen in the college division with 165 teman teams participating. Kansas State College, coached by G. H. Beck, won first place with the highest average score ever recorded, 490.6. Runner-up with an average of 478.4 was Ohio State University, coached by Harold Kaeser.

Next in the order listed and the coach included: California State Polytechnic College, Russell Nelson; Northeast Louisiana State College, W. P. Brasher; State College of Washington, R. E. Erb; University of Missouri, H. A. Herman; Rutgers University, Bruce Poulton; Western Illinois State College, E. L. Rice; and Ohio State University, Harold Kaeser and W. J. Brakel.

### Maryland Has 4-H Champions

Out of 906 4-H club teams from 44 states and Canada, the Stevensville 4-Leaf Clovers, Stevensville, Md., led by Charles A. Chance, won first place with an average score of 483.2. New York had six of the next eight high clubs, five clubs from the Marathon, N. Y., area. Second place winner was the Dry Hill Hustlers 4-H Club, Watertown, N. Y., led by Glenn C. Porter; while the Montgomery County 4-H Holstein Calf Club, Maryland, led by Irving King, had the third highest score. Also in the high group was the Black Canyon 4-H Club, New Plymouth, Idaho, whose leader is Alvin S. Johnson.

The winning club is located on Kent Island in Queen Anne's County, Maryland. All four members have dairy projects and each helps with the milking herd at home. Last year the club placed third in the Hoard's Dairyman Judging Contest. One of the boys, 14-year-old Peter Slot, (ninth place winner in the junior division) was born in Holland and came to this country with his family in 1947. Peter has been a 4-H club member four years.

"It was only a walk-on, but I had a part last night when someone left the side door open."

## Silage for Bulls

Does liberal feeding of silage impair a bull's breeding powers? Many dairymen in recent years have doubted that silage has this effect.

Now comes a preliminary report from the Pennsylvania Agricultural Experiment Station that seems to confirm the farmers' view. Twelve Holstein, Guernsey, and Jersey bulls two to nine years old were fed as much as four pounds of grass silage per 100 pounds of weight every day, plus enough hay to supply required total nutrients.

Results indicate no apparent detrimental effect from the heavier silage allowance, according to E. J. Perry, extension dairyman at Rutgers University, who reports the Pennsylvania test.

Trials are being continued to include an entire year.

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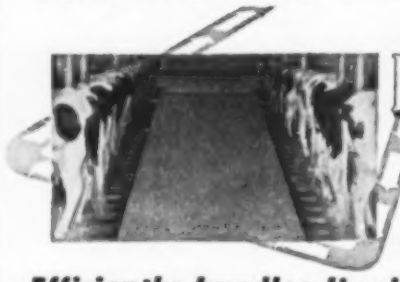

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Until the gravel bottom went out in slushy weather, the Pierce cows did all the work of unloading this trench silo. The owners feel paving the bottom and cementing up the sides will make self-feeding of silage from the trench a practical reality on this farm.

# This SELF-FEEDING Trench Silo Works

*by Norman Reeder*

LAST fall David and Jerry Pierce of Eaton County, Michigan, set up a pair of movable feeding gates at one end of their 20 by 100 foot trench silo and let the cows help themselves.

And it worked! That is, it worked until a week of early winter snow and rain so softened the gravel bottom that the cows began to churn it up. This is a new trench silo, excavated in 1951. There is a tile drain along each side and the bottom is covered with a foot of gravel.

"It's got to have a concrete bottom," says David. "Then we can clean up the droppings and scattered silage. Like any feeding area, this silo is bound to get pretty dirty with 30 cows running in it."

The Pierces are completely sold on the self-feeding idea and plan to have their silo concreted in time for early cut grass silage in June.

Until the bottom went out and they had to close it off, David reports that there were 8 or 10 cows feeding in the silo throughout the day. There was never any crowding along the 20-foot feeding space. The cows took turns, alternating between the silo and the hay feeding rack in the yard.

The bottom of this silo is on a level with the high corner of the barnyard. There is no problem of surface water draining into it. The sides of the silo are about 8 feet high. It was excavated in a hillside and the earth removed was used to raise the sides and divert surface water away from the area.

The Pierces dug the silo themselves with a tractor scoop.

One hundred feet has proved too long for a silo 20 feet wide. They have decided to shorten it to 50 feet and to pile the silage in deeper. Last year they filled it a little more than half full. This year they plan to stack the silo to the top of the walls.

The silage they are feeding now was made from long grass picked up from the swath with a buckrake. The buckrake traveled in the same direction as the mower and did a clean job of picking up two swaths at a time. Handled this way, the grass was not seriously bunched in the silo. They kept one tractor busy in the silo, packing.

***Will cover with sawdust . . .***

Last year the Pierces covered the silage with about six inches of dirt.

Hay, too, is fed outdoors at the Pierce farm. This feed rack is built on a regular 4-wheel wagon. When empty, the Pierces hitch it to a tractor and refill from overhead haymow.

When they shut the cows out, David and Jerry Pierce were faced with the problem of how to get out the unchopped grass silage for feeding at a bunk in the yard. Here, Jerry shows how they do it—with a sharp broadaxe. Slices 3 feet wide peel out well.

Next time they will use sawdust. Removing a frozen crust of earth has proved a hard job. Also, truckers unfamiliar with the layout mistook the top of the silo for a driveway on two or three occasions last fall and the ruts made perfect catch basins for rain water.

### *Spoilage no problem . . .*

Even so, there has been no freezing of silage in this trench silo and spoilage was no problem even in the early weeks of fall, the Pierces report. The cows cleaned up the silage along the 20-foot face fast enough to prevent heating and molding.

Since shutting the cows out, the Pierces have been removing the silage by hand at the rate of a trailer load a day and feeding it in a rack in the yard. The long material is cut with a sharp broadaxe in strips about three feet wide and loaded into the trailer with a pitchfork. It is easier to handle than chopped silage, they say.

The Pierce herd is handled in a loose housing arrangement. The loafing area is the basement of an old 40 by 80 foot barn with a dirt floor and 9 feet of headroom beneath the sills. This basement is open along most of the east side.

They have built a new pit type milking parlor in the northeast corner of the barn with milk house adjoining. This is a U-shaped parlor with the cows entering from an inside holding space next to the bedded area. Cows leave the parlor by an outside ramp to the yard.

### *Use pipeline milker . . .*

Milk goes from the pit to cans in the milk house through a stainless steel pipeline only seven feet long. The cans are fitted with vacuum covers connected with flexible hose, so milk is diverted to the next as as soon as one is filled. The operator does not leave the pit until the milking job is done.

This arrangement permits one man to do most of the work with the herd, and sanitation is excellent. Milk score cards show very low bacteria counts before pasteurization and down to a zero count after pasteurization.

These young dairy farmers—uncle and nephew—operate 295 acres. They have an 800-hen laying flock in addition to the 30-cow dairy herd.

Their dump truck is used to haul corncobs for the holding area in their pen barn. They prefer cobs to straw for areas of heavy traffic. Entrance to the milking parlor is inside.


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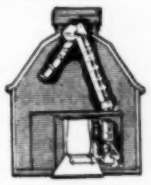

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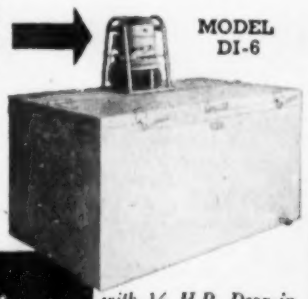

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Dairy Farm Home

# Pasteurizing Milk At Home

**Eat and drink good, wholesome milk. Pasteurize with an appliance especially made for the job. Or pasteurize with improvised utensils . . . but pasteurize.**

*by Marian Pike*

This housewife takes no chances. When pasteurization is so easy, she does not risk having her daughters drink raw milk.

IT'S HARD to believe that the milk from our own tested cows, which is handled exclusively by us under sanitary conditions, is not safe to drink raw. But when we face up to the facts we know that this is true.

We know that important as milk is in our families' daily diet, and in spite of the fact that no other food gives so much nutritional value for what it costs, still this important food in the raw state is often the carrier of such diseases as undulant fever, tuberculosis, typhoid fever, scarlet fever, diphtheria, dysentery, strep sore throat, and diarrhea.

Many of us have felt for a long time that we should start pasteurizing our milk at home, but we have put off getting started with this additional chore. Today, however, it is easy to make good milk, safe milk.

On the market are several commercial appliances with which you can pasteurize milk right in your own kitchen. The pictures on this page show you the steps in pasteurization with one of these appliances. You can see how easy it is to operate. There is no stirring to be done, no timing, no fussing over the regulating of the temperature. The appliance itself takes care of these details. Of course you will need to sterilize the covered containers in which you will store the milk once you have pasteurized it.

But you can pasteurize milk in your own kitchen with improvised equipment. For the job you will need: an accurate thermometer, milk bottles or fruit jars, caps, a cork, and a large container such as a water-bath canner which has a false bottom.

Fill the milk bottles, or fruit jars, with fresh milk to within one or two inches of the top. Cap them and put them in the water bath, making sure the water level is above the level of the milk in the bottles.

Then fill an extra bottle with water to about one or two inches from the top. In this bottle fit a cork which has a thermometer passed through it so it will reach about half way down into the bottle. Or, you can fit a thermometer into a two-piece mason jar cover. Get one of your men-folks to fix up such a device if you aren't handy at this sort of thing. You can use and reuse the same set-up.

Place the container on the stove and let it heat, but keep an eye on the thermometer in the bottle. After it reads 142° F., take the thermometer out of the bottle, cork and all, and test the temperature of the water bath. Adjust the fire to keep this temperature constant for 30 minutes. You will probably need to experiment with your stove so that you turn the heat down before this temperature is reached, or it will go too high. The temperature of the water in the bath should be around 148 to 150 degrees F.

So if it is higher, cool it to that temperature by adding a bit of cold water. Then adjust the flame to keep that temperature constant. Put the thermometer back into the bottle of water for further checking.

After holding the milk at 145° F. for 30 minutes, remove the container from the stove and transfer it to a place where the milk can be cooled slowly. One method of cooling the milk is to attach a hose to the cold water faucet and let the water run into the container from the bottom, overflowing the hot water. Cooling must be gradual to prevent breakage of the bottles.

After milk is cooled, place fresh caps over the caps already on the milk bottles and store the milk in the refrigerator.

This pasteurization process need not be a daily affair. If you have plenty of refrigerator space, you can pasteurize a 2 or 3 days' supply at one time.

Another method, the short time high temperature method, involves heating the milk quickly to 162° F. and holding at that temperature at least 15 seconds. Both methods require prompt cooling of the milk to a temperature of 50° F. or lower.

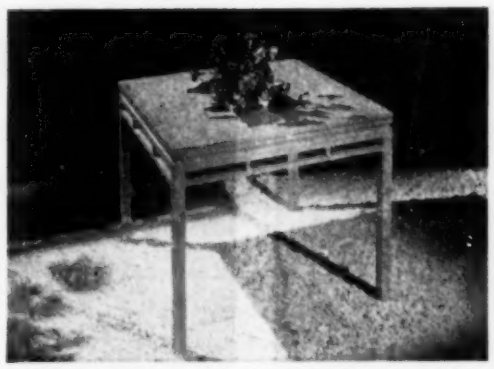
Once you begin pasteurizing milk at home for your family, you will feel a great wave of relief sweep over you and you will be mighty pleased with yourself that you are no longer taking chances with your family's health. **THE END**

Pour one to four quarts of milk into gallon bucket. Place in the housing.

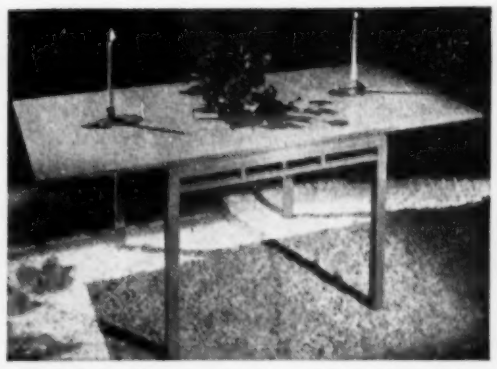
Place cover on housing. Turn switch. Pasteurizer then begins to do its work.

When buzzer sounds, remove bucket and cool quickly. Automatic timer-thermostat assures you of the proper temperature and correct timing.

The clean, uncluttered lines of modern furniture simplify daily living and personify good taste and good design.



Here's a good example of functional furniture. Its 36 by 36 inch size makes a practical game table.



The same table opens out into a 72-inch long dining table—spacesaver for the home with small dining area.

# How To Buy Furniture

**A bit of beforehand planning will avoid costly mistakes. Here are some basic helps to assist you to make the most of your furniture dollar.**

*by Virginia Blodgett*

GOOD taste in decorating isn't always determined by dollars and cents. Just because a piece of furniture has a high price tag doesn't guarantee good design. In many cases the flashy trimmings that up the costs are in themselves flagrant marks of bad taste.

If you know the difference between good and bad design it's easy to weed out the good furniture from the bad.

**DO** ask youself — is it really functional? Unless you're rattling around in a great mansion of a house, the space a piece of furniture is to occupy is an important consideration. So, to justify its existence each piece should serve a practical purpose.

If it's a dining room table — will it seat comfortably all the members of your family, with plenty of extra leaves for company? Will its shape fit in with the shape of your dining area? A round table needs a large space; an oval or rectangular table can be fitted into a smaller space. Or, if your dining room is a part of your living room, you'll probably want a gate-leg table that will occupy a minimum of floor space when not in use.

If you're buying a desk — is there plenty of drawer space? Or, is the storage space wasted on useless knickknack shelves?

If it's a coffee table you're considering, is it too small to be any more than purely ornamental? Or will it double as a handy serving table for snacks? If you're looking for lamp tables — will they do any more than just hold lamps? Drawers or shelves below would give added storage space for books or magazines.

A nest of little tables is a practical idea, too. It takes only a small space, but can be separated into individual serving tables.

**DON'T** be hasty in your choice — you may pay for it with years of regret before you can afford a replacement! So shop with plenty of forethought. Anything as important as furniture deserves a lot of careful planning.

It's easy to be taken in by the glib chatter of a salesman if you don't really know what you need and want beforehand. And don't make a decision when you're tired out from an all day shopping session. When you've looked at furniture for several hours, it's easy to become so rattled you have no idea what you really wanted in the first place.

Instead of buying something just because you "set out to", go home and start all over another day. It's better to be safe than sorry. Or, if you've found something you like, but you're still tortured by doubts, ask the salesman to hold it until the next day. Then make an unhurried decision at home.

**DO** be sure that drawer pulls or door handles provide a good grip. No matter how attractive they may be, they're merely useless ornaments if they don't fulfill their purpose. And do they look like they'll bear up under long and hard use? Your best bet for durability is a metal — brass, for instance. A painted or varnished surface may peel or chip off in time.

While you're trying the drawer pulls for size, be sure all the drawers slide in and out smoothly. The insides should be sanded against snags and their construction sturdy.

**DON'T** be dazzled by fancy trimmings. Overly-ornate drawer pulls, mosaic-patterned woods, "jeweled" insets — are all devices to catch your eye. But, in reality they detract greatly from the beauty and value of the furniture. Such unessential ornamentation displays the same type of bad taste as wearing too much makeup or jewelry.

A piece of furniture should draw attention by its beautifully grained wood, perfection of finish, and simple, uncluttered lines rather than "gingerbread" trimmings. Such trimmings will shorten the life of furniture, too. Cheap hardware may look shabby long before the furniture itself begins to age.

**DO** your splurging on the big, important pieces, and economize on the other less important pieces. One really beautiful piece of furniture can be the focal point of your room, give real character to the entire room setting. It's better to furnish sparsely with good furniture than to clutter your rooms with a hodge podge of mediocre pieces.

So, if your furniture budget is small, don't try to stretch it to cover an entire bedroom suite — it will probably mean sacrificing quality for quantity. Instead, buy just one piece, a stunning chest of drawers, perhaps — and then use a box springs on four legs for a bed. Chose the chest from open stock furniture, so you can add other matching pieces from time to time as your budget permits.

**DON'T** buy something that won't fit in with the furnishings you already have. No matter how eye catching a Chinese modern sofa may be, if the rest of your house is early American, it just won't fit in!

It is possible to mix period and modern, but the mixture has to be a subtle one. It must be a blending, rather than an extreme contrast.

If you're starting from scratch with your furnishing, devote a lot of thought to whether you want your home period or modern. Don't let just a whim dictate a sudden choice—it's pretty difficult to change once you've started in one particular style.

**DO** consider upkeep on the furniture you buy. If your household is bulging with children and pets, an expensive coffee table with a shining mahogany surface would probably reduce you to a state of nervous prostration. You and your family will be far happier with a table that "can take it." A leather-topped table or one of the new finishes that resist stains, scratches, and other forms of mayhem, would reduce the nervous strain all around.

The same goes for upholstered furniture. A sofa covered in a satin damask may be beautiful when it's new, but a little exposure to small children and a dog or cat may reduce it to a pretty sorry sight!

Color is a consideration, too. Dark colored, hard-surfaced upholstery will naturally be more resistant to soil than a light colored soft fabric.

Scratches and mars on blond wood aren't nearly as obvious as in the darker finishes. Nor will blond wood require as much dusting — a factor if you're pressed for time!

**DON'T** be taken in by bargain sales. An offer of three or four entire rooms of furniture (often with a set of dishes thrown in) at a cut-rate price should be viewed with some suspicion.

It's an easy way out in furnishing a house, but how about the quality of each individual piece? And such a motley collection of furniture will express very little of your own ideas and tastes.

Furniture clearance sales can be a real boon to a smart shopper or the downfall of the inexperienced one. If you know how to judge quality and know what you want and need, you can often find a real bargain. But often merchandise in a clearance sale are pieces that the store has been unable to sell at the original price because of poor quality or bad design. Such pieces have been "white elephants" to the store and will be the same to you if you fall victim to their "bargain" price tags. **THE END**

Mrs. Archie Spriggs, Island View Farm, Racine County, Wisconsin, stores away a selection of salad dressings she's made from recipes learned at her Homemakers' Group. She can whip up any sort of a salad from this collection of French dressings, mayonnaise, Thousand Island, and Roquefort cheese dressings.

Jane and Mae Spriggs have selected an orange-onion French dressing for the tossed salad they're making for the family supper. The girls belong to the Dover 4-H Club, where their mother leads the foods and nutrition projects. Last year they studied about salads and Jane and Mae demonstrated frozen salads at the Racine County, Wis., Fair.

# How To Dress Your Spring Salads

**Here are several recipes for salad dressings suggested by a group of homemakers that are guaranteed to add variety to your menus.**

*by Lois J. Hurley and Isabelle J. Groetzinger*

STARTING with a basic jar of salad dressing or mayonnaise, 900 women who are members of homemakers' groups in Racine County, Wisconsin, have learned that fun and flavor lie ahead of the cook who likes to give her vegetable and fruit combinations new dressings and isn't afraid to add that dash of difference which will guarantee popularity to her salad bowl.

At their fall meetings they tasted and tested a variety of salad dressings that impart this important "dash of difference," then went home and got busy. Since then, farm hostesses have been able to open their refrigerators on a neat row of home-made dressings and lay their finger on the one suitable for whatever salad they want to whip up. A few hours spent in preparation of dressings give them weeks of quick salad variation.

You probably have your own favorite recipes for those basics of the salad bowl . . . mayonnaise and cooked salad dressing. But just in case you'd like them, here are the ones that Racine County homemakers got at their meetings:

Mrs. Spriggs samples the relish-salad (See Surprise Salad in the article) that Jane has made. It can be stored in a tightly-covered jar in the refrigerator and is delicious with meats, as a relish, or as a salad course.

### Mayonnaise

1 tablespoon vinegar
¼ teaspoon dry mustard
1 teaspoon sugar
½ teaspoon paprika
⅛ teaspoon pepper
1 large raw egg yolk
1 teaspoon salt
1 tablespoon vinegar or lemon juice
1 cup salad oil

Mix together vinegar, mustard, sugar, paprika, and pepper in a small bowl. In another bowl add salt and tablespoon of vinegar to the egg yolk and mix well. Have oil at room temperature. Add two tablespoons to yolk mixture and beat with rotary beater until it thickens. Continue adding oil in small amounts, beating continuously till completely combined with the mixture and half the oil is used. Then add the vinegar and spice mixture. Beat well. Add the rest of the oil slowly, beating while adding. (Medium slow speed on the electric mixer may be used.)

### Cooked Salad Dressing

4 tablespoons sugar
2 teaspoons salt
4 tablespoons flour
2 teaspoons dry mustard
few grains cayenne
4 slightly beaten egg yolks
1½ cups milk
½ cup mild vinegar
1 tablespoon butter

Mix dry ingredients; add egg yolks and milk; cook in double boiler until thick, stirring constantly. Add vinegar and butter; mix well and cool. Makes two cups.

So much for the basics. Now here are variations giving the variety that is such an important ingredient to the salad bowl, especially when it's in regular use. Like we said, they may all be prepared and stored in the ice box in jars, ready for use on jiffy notice.

### Thousand Island Dressing

1 cup mayonnaise
4 tablespoons chili sauce
1 hard cooked egg, finely chopped
2 tablespoons chopped stuffed olives or chopped pickles
¼ cup chopped celery

Blend well together. Makes one generous cup of dressing.

### Russian Dressing

½ cup mayonnaise
¼ cup chili sauce
1 tablespoon celery, cut fine
1 tablespoon pimento
1 tablespoon green pepper, cut fine

Blend together. Makes 1 cup dressing.

### Tartar Sauce

1 cup mayonnaise
3 tablespoons chopped sour pickles
1 tablespoon capers (if available)
1 tablespoon chopped stuffed olives
1 tablespoon chopped parsley

Blend together. Makes 1 generous cup.

### Roquefort Dressing

(blue)

2 ounces Roquefort cheese
½ cup French Dressing
½ cup mayonnaise

or

2 ounces Roquefort cheese
1 cup mayonnaise
¼ cup lemon juice
½ teaspoon paprika

If all mayonnaise is used, mash Roquefort cheese to a smooth paste and blend into dressing. If French dressing is used, crumble the cheese into small bits and add.

In addition to the mayonnaise variations, homemakers were introduced to the family of French dressings, so adaptable and good on both fruits and vegetables. They, too, store well under refrigeration. Seal the jar tight and shake vigorously before using. Here are three favorites of Racine County good cooks:

### French Dressing Hawaiian

½ cup pineapple juice
2 tablespoons lemon juice
½ cup salad oil
1½ teaspoons grenadine or maraschino cherry juice
1 teaspoon sugar
½ teaspoon salt
½ teaspoon paprika

Combine all ingredients and chill. Shake or beat thoroughly before serving.

### Tomato Soup French Dressing

1 cup tomato soup
½ cup sugar
¾ cup vinegar or lemon juice
1 teaspoon salt
1 teaspoon pepper
1 tablespoon grated onion or sliced clove of garlic
1 tablespoon prepared mustard
1½ cups salad oil
1 tablespoon Worcestershire sauce

Combine the ingredients in a quart jar, cover tightly, and shake

well to blend permanently, or mix in in electric mixer. If garlic is used, take out particles before serving.

**Orange-Onion French Dressing**

1 cup salad oil
½ cup vinegar
½ cup sugar
juice 1 orange
juice 1 lemon
1 Bermuda onion (or other sweet onion)
1 green pepper
rind of 1 orange
1 canned pimento or ripe green pepper
2 teaspoons salt

Squeeze juice from orange and pare off white. Grind rind through fine food chopper blade. Add other vegetables to chopper. Mix with rest of ingredients and shake together in a jar. Pomegranate seeds can be used in place of pimento.

On a diet? Here's a salad dressing low in calories:

**French Dressing Without Oil**

1 teaspoon plain gelatin, softened in 1 tablespoon cold water
Dissolve mixture in ¼ cup hot water, adding
3 tablespoons sugar
Cool and add
½ cup fresh lemon juice
⅛ teaspoon dry mustard
½ teaspoon salt
½ teaspoon paprika
chopped pepper, onion, catsup, or seasoning to taste

In addition to the favorite salad dressings of Racine County women, as learned at their homemaker groups, here's one that enjoys state popularity. It's really neither salad nor dressing, but a tasty refreshing complement to all types of winter or summer meals. Try it and be delightfully surprised.

**Surprise Salad**

Grind one lemon, rind, and pulp (without seeds). Add ⅓ cup sugar and ½ teaspoon salt and let stand a while to blend. Grate finely two carrots and dice three apples. Add lemon, sugar mixture to apples and carrots and mix well. Place in refrigerator long enough to season and chill. Serve on lettuce or pass in bowl.

And from the author's file of favorites come these:

**Plain French Dressing**

1 clove garlic
½ cup vinegar
1 tablespoon sugar
1 teaspoon salt
½ teaspoon pepper
1 cup salad oil

Mix dry ingredients together; slice garlic into vinegar and pour over dry ingredients in jar. Mix well. Pour oil in slowly, stirring as you pour. Cover and place in refrigerator till ready to use. Shake well and pour over crisp salad greens, after removing bits of garlic.

**Sour Cream Dressing**

½ cup sour cream
2 tablespoons sugar
½ teaspoon salt
2 tablespoons vinegar
⅛ teaspoon pepper

Combine. Sprinkle with paprika if desired. (Use fresh bacteria soured cream.)

**Celery Seed French Dressing**

⅓ cup sugar
1 teaspoon mustard
1 teaspoon salt
1 tablespoon grated onion
⅓ cup vinegar
1 cup salad oil
1 teaspoon celery seed

Mix sugar, salt, and mustard in small mixing bowl. Add onion and small amount of vinegar and mix. Add oil gradually, then remaining vinegar and celery seed. (This recipe is also a favorite at the Student Union dining room at Purdue University.)

**Whipped Cream Dressing**

Juice of 1 lemon
Juice of 2 oranges
1 rounded tablespoon butter
2 rounded tablespoons sugar
2 level tablespoons corn starch

Combine in order given. Cook in double boiler until smooth. When cold add same amount of whipped cream and serve over raw or cooked fruit salads.

**Hot Bacon Dressing**

(A Pennsylvania Dutch recipe)

1 egg
1¼ tablespoons flour
1 cup milk or water
3 slices bacon
¼ cup vinegar
⅓ cup sugar
½ teaspoon salt

Chop bacon and fry crisp; remove from fat. Beat egg, add other ingredients and pour into hot bacon fat. Cook until thickened. Add bacon bits to lettuce, dandelion, or other salad greens, or cubed boiled potatoes. Onion may be added to greens or potatoes if desired.

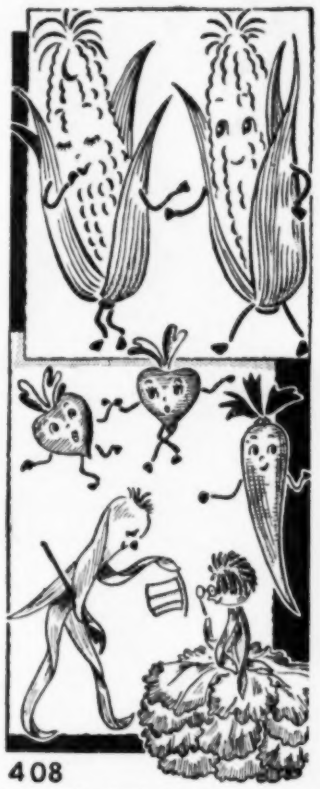
(Authors' note: Milk is the true Pennsylvania Dutch recipe but most prefer water.)

## Salad Dressing Chart

| TYPE OF SALAD | DRESSINGS TO SERVE |
|---|---|
| Fresh Vegetable Combinations | Plain French, Tomato Soup, French, or Orange-Onion. |
| Cooked Vegetable Combinations | Mayonnaise or Cooked Salad Dressing. |
| Fruit and Vegetable Combinations | Mayonnaise or Cooked Salad Dressing. |
| Vegetable and Cheese Combinations | Mayonnaise or Cooked Salad Dressing. |
| Meat, Fish, or Egg Gelatin Molds | Mayonnaise, Thousand Island, Russian Dressing, Tartar Sauce, Cooked Salad Dressing. |
| Fruit Gelatin Molds | Mayonnaise, Cooked Salad Dressing, Sour Cream Dressing. |
| Fresh Fruit Combinations or Cooked Fruit Combinations | Plain French, French Hawaiian, Whipped Cream Dressing, Mayonnaise or Cooked Salad Dressing. |
| Fruit and Cheese or Fruit and Nut | Cooked Salad Dressing or Mayonnaise. |
| Frozen Salad | Cooked Salad Dressing or Mayonnaise. |
| Tossed Salad Greens | Plain French, Tomato Soup French, Mayonnaise, Roquefort Dressing. |
| Cabbage Slaw | Sour Cream, Tomato Soup French, Mayonnaise or Cooked Salad Dressing. |
| Garden (Leaf) Lettuce | Hot Bacon, Sour Cream Dressing. |

All fruit salads are good mixed with mayonnaise or cooked salad dressings that have been thinned with fruit juice; peach, pineapple or orange are favorites.

## Multi-Color Transfers




Lively, "dancing" vegetables — ears of corn, heart-shaped beets, an onion "gentleman" bowing to a grand "cabbage lady," carrots, peas, string beans—twenty motifs in three-color transfer process are amusing, easy to hot-iron transfer right onto material. Colors are green, yellow, bright red. Use them on kitchen towels, runners, breakfast cloths, aprons, curtains, chair back sets. Fun to use! No embroidery needed!

Send 25c for the Dancing Vegetables Transfer in Color (Pattern No. 408) 20 motifs measuring 4 inches, 3 inches, 1 inch; transfer and laundering instructions to Pattern Department, Hoard's Dairyman, Fort Atkinson, Wis.

## "Good Luck" Motifs in Color

Pennsylvania "Good Luck" motifs are done in bright crimson and green — are in the instant-use, launderable, dye-fast transfer process which requires no embroidery! There are 8 "heart" corners for use on bridge cloths, tea cloths, buffet runners; there are 22 "good luck" signs to use on napkins, guest towels, apron and dress pockets, place mats, curtains; on barbecue pot-holders; on teen-agers head scarves.

Send 25c for the Pennsylvania Dutch "GOOD LUCK" Designs (Pattern No. 465) complete transferring and laundering instructions to Pattern Department, Hoard's Dairyman, Fort Atkinson, Wis.

## Layette Embroideries

Delicate and fragile-looking as little forget-me-not flowers are these wreaths, circles, bowknots, vines, clusters, and yoke-piece designs. There are 76 dainty motifs in the transfer pattern, enough to embroider a christening robe, sacques, baby pillows, nightgowns, and day dresses! Colors may be pink or blue, all-white, or a combination of dainty pastels.

Send 25c for the BABY EMBROIDERIES (Pattern No. 462) transfers and color chart for working sketches of all stitches used to Pattern Department, Hoard's Dairyman, Fort Atkinson, Wis.

## Skirt Embroidered Pockets

Handsome full skirt in dark wools, and big, big pockets (they measure 9 by 11 inches) boldy and colorfully embroidered in a bird, hearts, and flowers design is the neatest trick of a spring wardrobe! Tissue patterns for skirt; transfer pattern for embroidery design; all sewing, embroidery instructions included. Specify size in order.

Send 25c for pattern No. 410, sizes 24, 26, or 28-inch waistline, to Pattern Department, Hoard's Dairyman, Fort Atkinson, Wis.

2666. A shawl collar bolero, a front-pleated swirl skirt—both bring a princess sunback up-to-date! Dress can have halter top or shoulder straps. Sizes 12-20, 36-40. Size 16 ensemble, 7⅛ yds. 35-in.

2664. Top fashion news but simple to sew: a jacketed basque basic with wide skirt and scooped out neckline. (Bolero offers sleeve choice.) Sizes 10-20. Size 16, for dress and the bolero, 6⅛ yds. 35-in.

2265. A woman's choice for sheers or prints—the simple dress with definite ...ning points! Soft cape for three-quarter sleeves. Shirred shoulders. Slightly flared skirt. Sizes 12-20, 36-48. Size 18, 3⅛ yds. 39-in.

2635. The scoop neck princess dress returns to the fashion scene with the new bell flare—the kind to wear over a stiffened petticoat! (Three-quarter sleeves, too.) Sizes 10-20. Size 16, 4 yds. 39-in. fabric.

3026. New skirt fullness is the favorite formula developed in this bolero-sheltered sundress. Simple basque lines mean easy sewing in day or date fabrics. Sizes 10-20, 36-40. Size 16 ensemble, 4¼ yds. 35-in.

2659. "Jiffy" dress—front and back are each cut in just one main pattern piece, then nipped-in at waist for figure fit. Patch pockets add punctuation. Sizes 12-20, 36-48. Size 18, 3¼ yds. 35-in., 2⅛ yds. binding.

2653. A playsuit paired with easy-to-don panel-dress is a practical ensemble idea for daughter's vacation days ahead! Sizes 4-10. Size 8 dress with suit, 3¾ yds. 35-in. fabric and 2⅛ yds. of rickrack.

NO PATTERNS EXCHANGED. Send 25 cents for each pattern to Pattern Department, Hoard's Dairyman, Fort Atkinson, Wis.

Also send 25 cents for our New Spring-Summer Fashion Book.

# From Day To Day

*by Lois J. Hurley*

OUR neighbors to the south put in a lovely picture window last year on the north wall of their long living room. It opened up a vista of curving drive and elm trees that was truly beautiful in the full green leaf of summer or the deep white snow of winter.

But I wonder how they see the view the window was meant to frame. On the table in the window stands a tall, ornate lamp with spreading shade, a planter full of vines, and some pieces of bric-a-brac. All tasteful pieces, for my neighbor has excellent taste, but she has made the common mistake with picture windows . . . she has hidden the view.

There are two cardinal rules for picture windows and if you aren't going to observe them you might as well save the money these big expanses of glass cost you: First, there should be a picture worth a picture window and second, you should leave the window uncluttered so you can see the picture, once the window is in. It's a temptation to put some of your nicest "things" in these big windows, but don't do it. Set them somewhere else, even if the world passing by can't see and admire them.

* * *

**Next Sunday is Mother's Day. Let us of sincere intent make it an occasion of the heart and the gifts we give secondary. Stores and shops try hard to put a price tag on Mother, the second Sunday in May, but don't settle so easy. Put a warm, personal touch on your observance of Mother's Day and let mother know it's a pleasure and privilege, not a duty, to remember her.**

* * *

I can't remember when the dry goods shelves of dress materials have been gayer than they are this spring. If you crave color, by all means indulge your fancy this summer.

Some of the loveliest of the new materials are the brocaded cottons that came out around Christmas time in smocks and dusters. You can buy them for around a dollar a yard and in a wide variety of shades and patterns, brocaded in gold.

They're guaranteed washable and combine beautifully with matching plain shades. Why not a plain color basic dress with a brocade jacket or "cobbler's apron" overblouse effect? Another smart combination is plain with striped chambray . . . so lovely for summer because it's so easy to launder. Denim is especially smart this spring and comes in lush shades. It wears like iron and is crisp without starching. It's very popular for slip covers and draperies, too. Especially nice for draw drapes.

The new "miracle" fabrics we talked about in the column a couple of issues back are showing up here and there in yard goods, too. But they're a shade expensive. My favorite yard goods shop had one of the varieties last week and it was . . . hold your breath . . . $3.50 a yard! You'll have to do better than that, Mr. Manufacturer.

* * *

Nutritionists and foods workers continue their efforts to make cabbage a more popular vegetable and I add my voice from time to time, for I personally love cabbage.

How many of you cut off and throw away the loose green leaves from the southern cabbage you buy at the green market early in the spring or cut early from the garden, before the heads have firmly formed? If you're guilty of this because you don't know how to prepare it or find it too loose to cut for slaw, try these tricks:

Place the leaves in a tightly covered kettle with boiling water and steam them until limp. Then wrap a meat ball or patty (made up in your favorite way and don't forget the onion) in each leaf; tie it in a neat bundle with clean twine and simmer slowly in salted water for an hour. If you'd like a little "glaze", drain and put in a moderate oven in a flat baking pan for a half hour before serving.

Another delicious way of fixing these green leaves is to shred them coarsely and put in a heavy frying pan in a tablespoon of butter, melted. Sprinkle with salt and pepper, cover tightly and cook for five minutes, lifting the cover and "tossing" lightly a couple of times.

For a variation on this, cook the shredded cabbage in bacon fat and stir in two tablespoons vinegar and a tablespoon brown sugar. This makes sweet-sour cabbage, a good old dish of German origin. For a truly distinctive flavor, add a pinch of celery seeds.

For goodness sake, don't throw those loose green cabbage leaves away, ever again!

* * *

**My Sunday school class is studying the boyhood of Jesus and our lesson last Sunday dealt with the early home He probably lived in. There was a space in our work section for the pupils to list three things they think make a happy home. You'd be surprised how many of them listed television!**

**"Television. Food. Parents". "Brothers and sisters. Love. Television." "Loving, Helping, Watching Television." That's how some of the lists ran.**

**These youngsters are 10 years old and in the fourth grade. I offer no comment on the results of this listing, for I don't know what to say. But I DO know that any one of the 14 I have in class would be hard pressed to say, right off, whether Psalms are in the Old or New Testament (and we've just finished a study of the make-up of the Bible) but they could bring you right up to date on Hop-Along Cassidy!**

**What this proves I don't know, for sure, but maybe the time has come for churches to provide themselves with television or movie equipment by which they can present things Biblical to youngsters in a modern, dramatic form that will make a deeper, more lasting impression.**

**We offer our children a good share of their education by film and radio; we entertain them through sight and sound. Then we send them down into dingy church basements on Sunday morning to untrained (though earnest) teachers who ineptly try to read them into a state of grace from Sunday School leaflets that are often trite and dull. Are our churches a hundred years behind the times in providing for our children's spiritual training?**

# Springtime Poultry Management

*by H. H. Alp*

BABY chicks, and all poultry for that matter, are no different from any other animals when it comes to feeling the effects of springtime, and it will be a wise poultryman who will try to take advantage of spring fever and its effect on his birds. The following suggestions might be a help, realizing of course that circumstances may prevent one from making use of all of them:

### Chicks

1. **Wind Barriers.** Real young chicks can oftentimes be gotten out of doors into the sun a lot sooner and certainly more safely if one goes to the trouble of providing a simple wind barrier. Such a barrier can be quickly and cheaply made by using cut up feed sacks tacked to frames to form a corral or enclosure.

2. **New Clean Dirt is a Spring Tonic.** Spring cleaning of the poultry yard or range is worth while and if it can be done early it will mean a dryer and warmer soil condition. In cleaning the ground it will be helpful to rake it vigorously or cultivate or disc it lightly, particularly from the standpoint of getting rid of possible disease and parasite contamination.

3. **A Spring Lawn for Chicks.** Any fresh green feed is always a valuable addition to the ration, even if it is nothing more than an early seeding with oats.

4. **Some Playground Equipment.** Spring fever is certainly going to help make chicks frisky and it is not a bad idea to have some equipment around to give them a chance to burn up some of their surplus energy without using it up on one another. One of the best pieces of equipment to serve this purpose is an A-shaped set of roosting racks. This sort of contraption permits them to fly up one side of the rack and down the other side.

5. **Picnic Tables.** Another human trait of poultry is that they like to eat outdoors during nice weather and one can hardly blame them, particularly when you consider that feed in hot, stuffy brooder houses oftentimes becomes stale and dusty. Therefore, it is an excellent practice to keep outdoor feeders spotted around, along with plenty of drinking facilities, and if this should not be done, the chances are the flock will develop a lot of unevenness as far as growth and feathering is concerned.

### Laying Flocks

**Keep them in or keep them out** is always a difficult decision to make during nice spring weather. The right answer is hard to give for the reason that conditions vary so greatly, but the following points may help to arrive at one:

1. If the flock is not large and the market eggs being produced represent more or less incidental income, then I'd say let them out. However, if the flock is being kept for the production of market eggs as an important source of income, then in spite of nice weather I would say keep them in unless the house is very undesirable. A compromise on this question might be to keep them in until noon or one o'clock or thereabouts and let them out in late afternoon, and in many ways this is not a bad practice. They stay in long enough to get the eggs laid and take on enough feed and water to maintain production and the afternoon run amounts to nothing more than an outdoor spree.

Dirty eggs are always a problem in the spring of the year and by keeping the birds in until mid-day or later helps to prevent dirty feet from soiling clean eggs.

2. **A Clean Range.** It is just as important to have a clean range for laying birds as it is for young stock and the same recommendation made for chicks holds true for laying birds.

3. **Adjust poultry house windows and ventilation** to spring and warm weather conditions. This is particularly important if the birds are not getting outdoors, for there will be days when windows can be either removed or opened up sufficiently to permit direct sunlight. While the direct sunlight is not too important, it is, nevertheless, just as much a spring tonic for them as it is for anyone else.

4. **Spring House Cleaning.** There is probably nothing more demoralizing to both the birds and the person looking after them, than to have to walk into a hen house on a nice spring day and look at the winter's accumulation of dirt. This is particularly true regarding feeders, nests, and water equipment. If you haven't got the time or the urge to clean house thoroughly, at least get up enough ambition to do the nests and all other equipment.

5. **Keep Eggs Cool and Gather Frequently.** Don't forget that during the spring of the year a lot of birds will, through natural instinct, want to indulge in a spell of broodiness, and a broody hen can soon ruin a lot of good market eggs. The body temperature of a hen is normally very high, over 100 degrees, and it doesn't take very long for an egg to lose its quality when exposed to temperatures 100 degrees or higher. Kick these broody birds out of the nest — either pen them up or sell them, and gather eggs frequently.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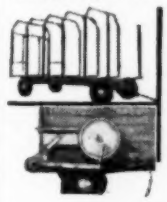

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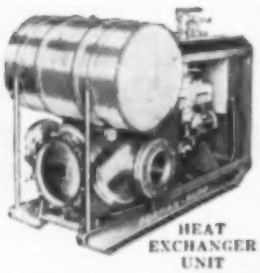
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# Will Poultrymen Meet Today's Competition?

*by W. P. Mortenson*

WHEN the shopping lady walks into the grocery store, no less than 2,000 different items are virtually saying, "Please, Mrs., I want to go to your house. Will you take me home?"

The retail store is only a stop-over for the vast number of farm products on the way to the kitchen table of the American family. These products are in sharp competition with each other for a place on the family table. Eggs and poultry are but two of these 2,000 items. The eggs that you produce are in competition with breakfast cereals, pancake mixes, bacon and ham, and dozens of other items attractively packaged and displayed on the grocers' shelves.

### Poor Quality Eggs Can't Compete

Soiled, poor quality eggs simply can't compete with some of the attractively packaged, fine flavored foods on these shelves and cooler cases. They have two strikes on them at the start.

The other day we heard an egg producer say, "I can wash my eggs so the buyer doesn't know the difference, and washing doesn't take long." Perhaps his statement was true, but washed eggs are almost sure to cause trouble before the shopping lady serves them on her breakfast table. Here is an experience that one of the large egg handlers — a producer owned egg marketing cooperative — had recently with washed eggs.

After running out of answers to that eternal problem — dirty eggs —this organization went "back to fundamentals" and launched a clean egg program. Their operations are devoted almost entirely to marketing shell eggs in branded retail cartons to food stores. This way the egg producers are very close to Mrs. Consumer and therefore are very sensitive to her wants.

For years producers marketing through this organization have had a problem of dirty eggs and they tried to find the answer by washing them. But, according to Larry N. Thompson of the "PPCC", real trouble started some four years ago, about the time that mechanical washers started to become popular with producers. Producers right and left who supplied this cooperative, bought equipment and started washing all their eggs, both clean and dirty. Almost over night, troubles all but exploded in their faces! Sour eggs in unusual numbers turned up in storage. Complaints on the quality of the eggs came in almost daily from consumers.

### Washing Not the Answer

Finally the trouble was discovered. It was coming from a microscopic organism found in the soil that was easily spread in the egg washing operations. Many attempts were made to improve the methods of washing and some progress was made. But to this day they haven't found the answer.

At first they hoped they could find the answer by cleaning or washing eggs in the cooperative plant but the story was almost the same as it was on the farms. They couldn't improve washing methods enough. There were heavy losses in storage eggs, too few top grades, and too many undergrades. Complaints from consumers and retail merchants added up to thousands of dollars loss and brought things quickly to a head. The management finally quit washing even heavy dirties in their own plants.

### Premium for Unwashed Eggs

In planning this program, producers insisted that the cooperative should pay more for clean, unwashed eggs than for washed ones. That plan was agreed on. The premium now in effect is 1½ cents per dozen for clean, unwashed eggs. Of course, this means that the lower quality eggs are bringing less money than good ones and that's as it should be. These clean top quality eggs are packed separately from dirties or washed eggs, and are so marked. At the plants, eggs are spot checked by ultraviolet floodlights to verify unwashed eggs.

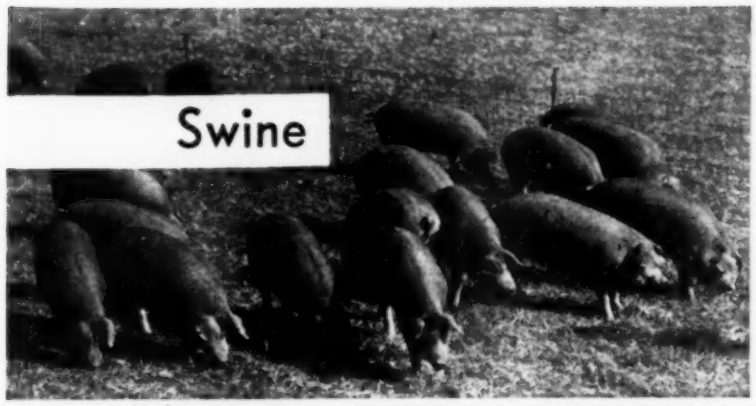
The more complete quality improvement includes:

1. The use of ultraviolet light to show sour eggs to farmers at meetings.
2. Passing research information on to producers to discourage egg washing.
3. Giving publicity to producers who are producing clean, top quality eggs and delivering them unwashed.
4. Encouraging the use of nests designed to keep eggs cleaner.
5. Encouraging the use of mechanical dry cleaners as a substitute for washers.
6. Most important of all, a premium for clean, unwashed, top quality eggs.

### Storage Losses Down

Is all this bringing results? The answer is yes, slowly to be sure, but steadily. From January 1 to December 29, 1951, this cooperative raised the percentage of clean, unwashed eggs from 44.5% of their total receipts to 67%. And storage losses were down from 12.78 eggs per case in 1948 to 3.81 eggs per case in 1951.

In 1948 large AA grades came out of storage averaging 69% large A, 18% large B, and 6% grade C and checks. In 1951 they graded 83% A, 11% B and 3% C, and checks. "Our clean egg program is here to stay," says the management. "We recommend it in some form to others. It's not easy — but it's sure. Remember," they say, "eggs are food — and consumers like their food clean and uncontaminated."




# Mineral Lack Leads To Trouble

*by J. J. Lacey*

SHORTAGES or total deficiencies of certain elements in hog producing areas oftentimes lead to trouble that is blamed on many other causes. Luck comes in for much of the censure, but a better knowledge of animal needs could place the blame on lack of proper nutrition.

It is now generally recognized that rations can be built to include all of the essentials for good health and proper growth and maintenance, and it is up to the feeder to know his p's and q's on ration building. This statement goes for the gestation months as well as for the growth period before and after weaning.

One element often short in certain districts is iodine. Iodine is necessary for farm animals, pigs included, because it governs the rate of metabolism, or "burning up" of feed in the body. A hormone, thyroxin, is secreted by the thyroid gland in the neck.

Thyroxin contains iodine, and if the thyroid gland does not secrete enough iodine by means of this thyroxin to take care of the body needs, the animals will suffer in growth and vigor. Sometimes the thyroid gland will enlarge in its effort to step up iodine secretion and goiter becomes evident. Goiter is not a disease but a condition due to overwork of the thyroid secretory function.

Some of the best examples of goiter disturbances are found in litters that are born with some or all of the pigs dead and hairless. Naturally, the hairlessness is the result of the sow's nutrition during pregnancy rather than being caused by bad conditions at farrowing time. The fat, bloated, pulpy condition of pigs in hairless litters is a general indication of iodine deficiency.

Today there are easy ways of correcting this loss. If sows are fed iodized salt, free choice, from breeding to farrowing times, a safe procedure is established. Modern salt mixtures and compounds are manufactured to carry enough iodine for safety. In iodine deficient states, such as some of those near the Great Lakes, it would be advisable to feed iodized salt free choice at all times. In seacoast areas, iodine is plentifully supplied through the sea water sprays and condensation. In the states that border on the oceans, extra feeding of iodine may be harmful, since excessive amounts upset the body functions.

Iron and copper are two other essential elements in swine feeding. Their absence may create anemia or thumps in young litters a few weeks old. Both minerals are necessary to the building of hemoglobin content of the blood. The anemia is most pronounced when pigs are living on sow's milk alone. The milk of the average sow is definitely short in copper and iron.

Until pigs are old enough to secure copper and iron from other feeds there is need for supplying it in some artificial way. Only minute amounts are needed but these are needed badly. Iron is required for the body processes as well as for transporting the oxygen in the blood stream.

With present knowledge of good feeding, losses through anemia or thumps are entirely unnecessary. Most impure iron compounds contain enough copper to correct any deficiencies in feeds, and for young litters an application of ferrous sulfate solution on the udders of nursing sows will eliminate thumps at very little cost. Three ounces of ferrous sulfate crystals dissolved in one quart of water, and the resulting liquid applied to sows' teats and udders once per day is an excellent guarantee against thump losses.

As soon as litters are old enough to eat grain or to root in the soil, they will get iron and copper from these sources and artificial feeding may be stopped. On many farms a pailful or shovelful of heavy soil is placed in the pen and the needed elements are fed in this way. This method replaces the ferrous sulfate application.

Other "trace" minerals are required for good growth, but the three mentioned above hold a prominent place in pork production. Supplies are important and methods of feeding are easy. To the hog grower this might be smart advice — "use them."

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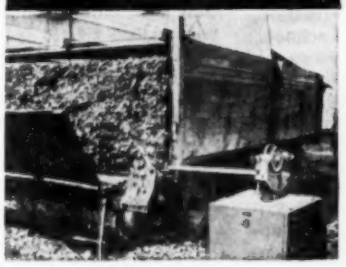

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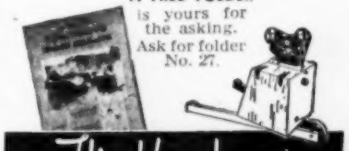

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Young Dairymen

# Land Judging

## *is like Cow Judging*

Edd Roberts shows boys how to get the feel of soil.

**For proper land treatment a farm boy must know his soil, love his land, and conserve his heritage.**

*by Edd Lemons*

A LITTLE over 10 years ago a new idea in teaching land judging blossomed in Oklahoma, destined to spread across the country like a prairie fire. The contest was organized a great deal like a dairy or livestock judging contest, except that land was used instead of cattle.

The first such land judging contest was held in 1941 on the Red Plains Experiment Station near Guthrie, Oklahoma, with Harley Daniel, project supervisor, and Edd Roberts, Oklahoma extension soil conservationist, helping put on the first event of this kind.

### *40,000 trained in Oklahoma alone . . .*

Only 25 4-H club members participated in that first land judging contest in 1941. Since that time the popularity of the event has spread all over the Sooner state and to five other states as well. Missouri, Michigan, Texas, Kansas, and Nebraska now are carrying on similar contests, and possibly additional states. More than 40,000 persons in Oklahoma alone have been trained in soil judging by this unique and interesting method, with 37,000 of them being trained in 185 schools, or outdoor classes, during the past four years.

At least two major factors have played a part in the story book success and popularity of the land judging contests. First, it gets away from the stuffy classroom atmosphere out into the open fields themselves, where students get a more concrete conception of the actual problems and their solution. Second, and perhaps just as important, these land judging contests have enjoyed complete cooperation of the various agencies and individuals concerned with this educational work.

### *F.F.A. and 4-H taking over . . .*

Soon after the event was started at Red Plains in 1941 with 4-H club members participating, Byrle Killian, then vocational agriculture instructor at Guthrie and now assistant state supervisor of vocational agriculture in Oklahoma, brought the Future Farmer of America boys into the contest. They now have an annual contest of their own, just as do the 4-H members. A plaque is given each year to the high scoring FFA team, sponsored by Hugh Jones, a district supervisor of the FFA in Oklahoma.

Much of the credit for organizing the contest similar to a dairy cattle judging contest goes to Dan Diehl, former Oklahoma Extension district agent, now retired. The idea caught on immediately with youth and adult alike who found it easier to inspect fields, look at the land, feel the soil and subsoil, and finally to check the prepared score cards as to the land hazards and suggested treatment.

### *County contests in 1946 . . .*

It was about 1946, Roberts recalls, when the program moved out to the field, with participation on a large scale in the county contests. The first such county event was held in Pauls Valley, with Alton Perry, county agent, and Sam Lowe, district conservationist with the soil conservation service, doing much of the work. Five hundred men and boys participated.

Perhaps another reason for the growth of this system of land judging is the continual search for improved methods of carrying on the event. Roberts says the score cards and other material have been revised 27 times since that first contest.

Farmers and ranchers who are members of boards of supervisors of the soil conservation districts, felt this was the right approach and have given it their unqualified support. "Red" Atkins, a Guymon, Oklahoma rancher, told the national convention of SCS boards of supervisors in Atlanta about the contest. John Myers, chairman of the Logan county, Oklahoma, soil conservation district, has contributed much time and thought to making the contest successful.

Civic groups, chambers of commerce, G. I. teachers, home demonstration agents, and Indian service technicians have had a part in boosting the contest.

L. G. Monthey, executive secretary of the American Society of Agronomy, said recently of the contest, "For my money it is one of the finest conservation programs ever designed for rural youth in America and it can be applied in any state in the Union."

Oklahoma's extension director, Shawnee Brown, recognized the possibility of the program in the beginning and has made the facilities of his organization available for pushing this educational medium.

Another Oklahoma farm leader, Harry Chambers, state soil conservationist with the SCS, also made it possible for his soil scientists to participate and make official placings.

"We know that we cannot make soil scientists of these folks in one contest," Roberts says, "but we can teach the weak and strong points of the land and what to do about them." Roberts feels that these lessons in land judging stay with the youth regardless of what profession they follow. Professor Staten of Oklahoma A. and M. college has used the land judging methods in recent years in teaching his students their prescribed courses in agriculture.

The chief lesson which the contest gets across to the participant is the hazards of the land as far as production is concerned. Such things as wetness, overflow, tough subsoil, loss of top soil, slope, drainage, and shallowness of soil that hamper production. These things actually put a limitation on the land. For that reason the land can be classified into what is called "capabilities". There are eight classes of land capabilities and each person participating must decide the proper classification.

### *Steps training schools make . . .*

Here is how these land appreciation training schools are conducted. First, there is a half day of indoor training, much like a football team may hold a "skull session" before actual scrimmage. Leaders explain the contest, how to determine land hazards, how to check the answer sheets, and the other information necessary for a smooth-running event. Then comes a half day of outdoor classroom work where contestants actually walk around and across the contest fields, look at the soil, examine the slopes, note amounts of erosion, and the many other things they have been told to look for.

These schools are always operated under the direction of the county agent, with the other agricultural agencies cooperating.

A day of preparation on the spot where the contest is held is necessary so the leaders in charge will make it "click like clockwork", and the contests usually do just that. As the contest has grown Roberts has found it necessary to use his time largely in directing the event and depending more and more on his leaders to carry on the detailed part of the program.

A sample pit is dug in each of the several fields the group will examine. Contestants are encouraged to examine the subsoil, and make the proper placing on their multiple-answer card.

**"Our big objective,"** Roberts says, "is to help people learn how to perpetuate the land, how to make it more profitable now for food production and maintain the land for future generations."

**THE END**

**Editor's Note: Use Oklahoma Extension Circulars No. 510 "Land Appreciation" and No. 509 "Know Your Soil" for reference. These may be obtained by writing Extension Service, Oklahoma A & M College, Stillwater, Oklahoma.**

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# Dairy Digest

### NEW HOLSTEIN FIELDMAN

The Holstein-Friesian Association of America has employed Robert L. Cain, Maryland, as fieldman for the southern field territory which will include Kentucky, Tennessee, Louisiana, Mississippi, Alabama, Georgia, South Carolina, and Florida.

A graduate of the University of Maryland, he has served as an assistant county agricultural agent in Maryland. One of Mr. Cain's first duties will be to accompany the association's new mobile exhibit which will appear at most of the major fairs and expositions throughout the nation this summer on a 15,000-mile tour.

### WEST VIRGINIA DAIRY DAY

West Virginia University's fifth annual Dairy Day will be held in Morgantown, June 25, according to Dr. H. O. Henderson, head of the dairy husbandry department. The opening session will be held on the campus and the remainder of the program will be held at the University Dairy Farm outside of Morgantown.

### A. D. A. OFFICERS ELECTED

At the recent 13th annual meeting of the American Dairy Association, Harold M. Stanley of New York was chosen assistant secretary and treasurer. William J. Murphy of North Dakota, who previously held the post, was elected treasurer of the American Dairy Association replacing Wm. J. Swayer of Illinois.

C. R. Schoby, Iowa, and Merrill N. Warnick, Utah, are serving their second year of two-year terms of president and vice-president, respectively. George F. White of Louisiana was re-elected secretary.

More than 300 delegates attended the dairy rally and membership session where the dairy advertising, merchandising, research, and publicity program was presented.

### HARVARD MILK DAY

Over 40,000 people are expected to attend the annual Harvard Milk Day at Harvard, Ill., Thursday, June 5. An open cattle show will begin Wednesday, June 4, when the prize cattle from Northern Illinois and Southern Wisconsin will be placed on display and judged. These cattle will remain over on Thursday for the inspection of the thousands of visitors to Harvard Milk Day. This year a division for 4-H and FFA members will be held in connection with the cattle show.

Festivities on June 5 begin with a large parade down Harvard's famous Milky Way led by the reigning queen, Miss Mary Streit.

Harvard Milk Day is sponsored by the Harvard Chamber of Commerce in appreciation for the contribution of Northern Illinois and Southern Wisconsin dairymen to the health and prosperity of the region. The first such celebration began in June of 1942.

### ANNUAL HOLSTEIN CONVENTION

The 67th annual convention of the Holstein-Friesian Association of America will be held in Roanoke, Va., June 2, 3, and 4. The National Convention Holstein sale will take place Thursday, June 5.

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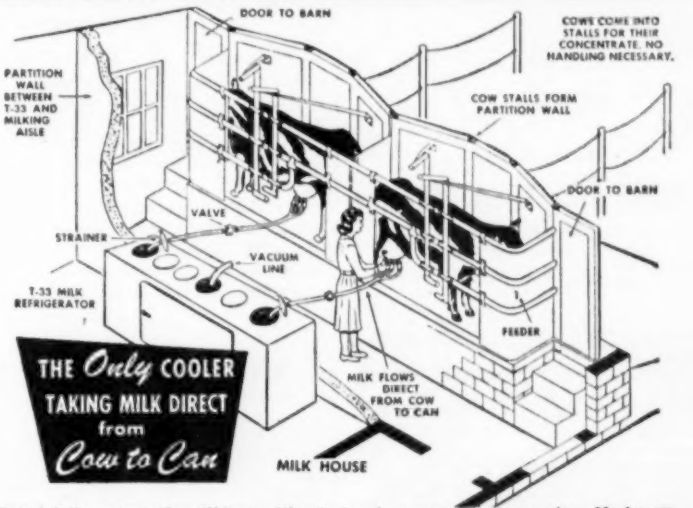


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## 34 More Pounds Per Cow

Wisconsin cows resulting from artificial breeding are producing about 34 more pounds of butterfat each lactation than the average cows in Wisconsin dairy herd improvement associations.

That's the report of N. D. Bayley and E. E. Heizer, after they summarized the records of 2,180 daughters of 161 sires. Of these, 1,711 were sired by 77 Holsteins, 432 by 72 Guernseys, 20 by eight Jerseys, and 17 by four Brown Swiss.

## Elliott Joins American Breeders Service

On March 1 Dr. F. Irvin Elliott, formerly head of the Department of Animal Industries at the University of Connecticut at Storrs, Conn., resigned that position to become manager of American Breeders Service Southeastern Stud, Asheville, N. C.

Dr. Elliott replaces Mat Dietrick who has been promoted to operations manager. Mr. Dietrick will be in direct charge of the six American Breeders Service bull studs, located at Duluth, Minn.; Madison, Wis.; Indianapolis, Ind.; Kansas City, Mo.; Palo Alto, Calif., and Asheville, N. C.

## Effect of Twinning on Production Level

The records of 162 cows that had dropped twins were recently studied by the New Zealand Dairy Board. In the lactation following twin birth the average yield was 322 lbs. fat. In the lactation following single birth the average production was 347 lbs. fat.

| | Lactation after twin birth | Lactation after single birth |
|---|---|---|
| No. of cows | 162 | 162 |
| Ave. lbs. fat per cow | 322 | 347 |
| Herd ave., lbs. fat | 303 | 307 |
| Difference from herd average | +19 | +40 |

All records of 2- and 3-year-old cows in the analysis were corrected for age. This points out why their average yield is above the herd average which includes the uncorrected records of 2- and 3-year-olds.—New Jersey DHIA Studies 291.

# Semen Shipped By Central Ohio

DURING 1951, 363 gallons of diluted semen were shipped from the Central Ohio Breeding Association to technicians in central and southern Ohio. Shown above is C. E. Knoop of the association. He is holding a five-gallon can, which represents the quantity of undiluted semen collected at the central bull stud. The exact amount was 4.64 gallons.

When diluted, this semen amounted to 363 gallons, enough to breed 1,373,955 cows, if all of it were used. Even in the case of the highest dilutions made, there are still at least 7,000,000 living sperms per one cc. of diluted semen (the amount used for breeding one cow artificially).


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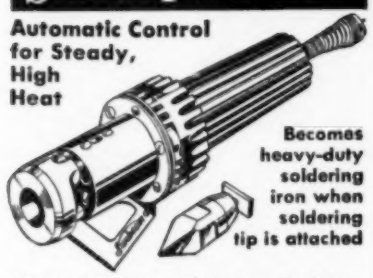

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# What's New in Making Grass Silage

(Continued from page 415)

the crop is too dry; or if juice is squeezed out and it remains in a compact ball, its moisture content is above the recommended range. Since this wilted silage is more difficult to pack it is generally recommended that it be chopped with a ⅜ inch cut.

(Read "Here is a Simple Test for Grass Silage" on page 429 of this issue for the latest in moisture tests. —EDITORS.)

### *The direct cut — No preservative method . . .*

This method is not being recommended by most silage experts at the present time but is gaining in popularity among farmers. With this method the standing crop is cut, chopped, and delivered to the wagon, then placed directly into storage without any preservative.

The method itself — disregarding end results—offers many advantages over the other practices. The important ones are:

1. It saves time, labor, and money because one man can cut, chop, and load the crop in one trip across the field.

2. It eliminates the extra chore and expense of adding a preservative, or closely watching a critical moisture content.

3. There is less danger of the machine picking up field stones which usually cause considerable damage to the forage harvester.

4. It results in a saving of power because a ¾-inch cut may be used.

This looks like an ideal way to make grass silage. Most scientists have been reluctant to recommend it, however, because of several disadvantages which we should not overlook. These are:

1. It may result in a rancid, off-flavor, soggy silage.

2. Considerable leakage, drainage, or "weeping" of the silo results from the high moisture content. This will result in some loss of nutrients and may create some sort of a nuisance around the farmstead.

If the crop is ensiled at 75% moisture, it would mean that over 1,600 gallons of liquid would drain from a 14x40 silo.

I would suggest that if you use this method, be sure to provide good drainage and perhaps put in a layer of dry hay in the bottom of the silo before you start making silage.

It seems to me that *if* we can obtain satisfactory results with this method the making of grass silage may be easier than heretofore thought possible. Reports from farmers who have tried this method during the past ten years indicate that good silage is being made by direct cut—no preservative method. It generally is ensiled with a moisture content above 70 per cent in silos which permit ample free drainage.

Observations to date tend to show that best results seem to be obtained with the direct-cut method when the following set of conditions prevail:

1. The crop is a mixture of grasses and legumes.

2. The moisture content exceeds 70 per cent.

3. The silo permits ample free drainage.

4. The crop is cut before any of the bottom leaves start to turn brown.

The addition of liberal quantities of grain or corn meal to the chopped material will greatly reduce the drainage from these high moisture content crops. I think I will go along with scientists and recommend grain preservatives, especially if the moisture content is above 75%, but the final answer to these new trends in grass silage making may well rest with you farmers, and of course the dairy cow.

Our remaining task is to store grass silage. In the next issue we will discuss stacks, trenches, pits, temporary, conventional, and air-tight silos. **THE END**

## Disposing of Farm

The elderly farmer who would like to slow down may discover the answer to his problem in an installment sale of his place, with liberal terms. Frank V. Beck, extension farm economist at Rutgers University, suggests this.

Dr. Beck has found that a good many farmers would like to retire but they know that an outright sale would mean that they would have to part with a large part of their life's savings in income taxes. They put off selling until eventually the farm runs down and must be sold at a low price.

The aim for the mature farmer should be to transfer the heavy work and responsibilities gradually to the next generation. If a son or daughter cannot take on the responsibility, perhaps he can find a reliable young couple, short on cash but long on ambition and honesty.

The State University economist explains that the down payment cannot be more than 30 per cent of the selling price of the farm in an installment deal. The seller keeps most of his money invested in a safe place — his farm, drawing interest and keeping the deed until the buyer pays off enough to take title.

It is better, in Dr. Beck's opinion, for a farmer to sell out to an experienced young farm couple with strong character references than to dispose of his farm to a person without a farm background who may have enough capital to make a 50 or 60 per cent down payment. It's better for the community, too, because the farm stays in good hands, with the probability that sound cultural and management practices will be used.

## Correction on Opal Crystal Lady

In our April 10 issue we stated that the famous Jersey cow, Opal Crystal Lady, had produced 94,339 lbs. milk containing 4,983 lbs. fat in six lactations. She produced this amount in five lactations and her total for six is 114,617 lbs. milk containing 6,059 lbs. fat.

In offering her offspring a word of advice, a mother said, "Son, from here on never do anything that you would be ashamed for the whole world to see you do."

"Oh, boy!" shouted the happy youngster. "Just think, no more baths!"

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**The rate for advertising in this department is 30 cents per word per insertion, except for "help wanted" and "positions wanted" advertising which is only 20 cents per word per insertion. Count address. "J. W. Foley, Route 13, Green Bay, Minnesota," is considered as eight words. Blind advertisements must be signed: "BOX #, care Hoard's Dairyman, Fort Atkinson, Wisconsin" and count as 8 additional words. Count each initial or group of figures as a word. SEND CASH OR CHECK WITH ORDER. Copy must reach us four weeks ahead of date of issue. NEW ADVERTISERS MUST FURNISH REFERENCES. Send order to HOARD'S DAIRYMAN, Fort Atkinson, Wisconsin.**

### DAIRY CATTLE

**FOR** Sale—100 head open and bred Holstein and Guernsey heifers. Can furnish springer cows and heifers. Write or phone C. A. PAULSON AND SON, Neillsville, Wisconsin. 12-*

**KENYON** Brothers Farm serving the dairy farmer for forty years. Large selection of choice Holstein cows and first calf heifers, fresh and close springers, service bulls. T.B. and Bang's tested. In carload or truckload lots. KENYON BROTHERS CO., Elgin, Illinois. Phone Elgin 1816. 1-*

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**KEATING** Brothers Farm. Large selection tested Holstein and Guernsey fresh and springing cows and first calf heifers. We ship on orders, assure yourself of good cattle, telephone 414—Fort Atkinson, Wisconsin. 5-*

**ATTENTION** dairymen and cattle dealers. We can furnish you Holstein heifers to freshen this fall. Cows of all breeds. Let us know your needs. We can supply them. BOTTEMA Farms, Bridgeport, Ind. Plainfield 8266. 20-*

**REGISTERED** Holstein bulls from DHIA plus proven sire and HIR dams with records to 600# fat. Priced for the practical farmer. Accredited and certified herd. Write CRAIG BEANE, Holwis Farm, Fort Atkinson, Wisconsin. 9-2

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**REGISTERED** Wisconsin Holstein calves — for high production herds. Exceptional offering of choice Wisconsin Holstein calves. Available in large quantities. Also some Guernsey and Brown Swiss. Vaccinated against shipping fever. Health sheet furnished. Well started—no milk required. Visitors welcome. Write or telephone J. M. McFARLAND & SONS, Watertown, Wisconsin. 1-*

**HOLSTEIN** cows and heifers. 50 years same location. JESS LATHROP, Dundee, Ill. 8-*

**FOR** Sale—25 springing first calf Holstein heifers. Write ROBERT STOXEN, Harvard, Illinois. Phone 400-J-2.

**PIPER** Bros. Farm—Purebred and grade Holsteins, production, type, pedigrees and health. Let us quote you prices on quality Holsteins. Phone 2170, Watertown, Wisconsin. 3-*

**WISCONSIN'S** finest Holstein and Guernsey cattle, cows and heifers. STRAUSS BROS., Highway 26, south of Watertown, Wis. 4-6

**GRADE** Holstein and Guernsey springing cows and heifers — Phone Caledonia 223, GREEN MEADOW FARMS, Roscoe, Illinois. 20-*

**MILKING,** springing cows and heifers, many calfhood vaccinated; artificially bred; shipping fever vaccinated; TB-Bang's tested; COD shipments by truck. Sorry, no calves. KLEIN'S DAIRYLAND ACRES, Menomonee Falls, Wisconsin. Telephone 3700. 6-*

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**SOUTHERN** bred registered Jersey and Holstein bulls from officially classified and tested dams. Sunshine registered herd in continuous operation over 40 years. Sunshine bulls transmit high production and good type udders. JIM MAVERICK SUNSHINE RANCH, San Antonio, Texas. 5-spl

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**DAIRYMEN**—Why pay more? Buy direct. Quality dairy heifers' cows, T.B. and Bang's free. Cattle shipped on order. R. H. WALTER, Lannon, Wis. Phone 28M5. 9-2

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**HERDSMAN** well qualified. Married. 100 miles radius of Chicago. BOX 893, care Hoard's Dairyman, Fort Atkinson, Wisconsin.

**EXPERIENCED** herdsman wants job. Manager, showman, test cow milking. Shares, 26, sober, married. On dairy farm. GORDON JERVIS, Camden, Ohio, R. R. 2.

**FARM** manager or operator age 49. Large family, extra help. Former Holstein breeder, excellent herdsman. Able, alert, sober. BOX 899, care Hoard's Dairyman, Fort Atkinson, Wisconsin.

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**TEST** cow milker to milk three times string twelve cows. Prefer man with no more than three in family. Good living quarters; all utilities paid. Wages depend upon man. BOX 851, care Hoard's Dairyman, Fort Atkinson, Wis. 6-*

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**FAMILY** of three with son old enough to work. Steady. Father or son to work either with chickens or in the dairy. Mother could also possibly work with poultry. Good living conditions. Excellent wages for all. Permanent. BOX 852, care Hoard's Dairyman, Fort Atkinson, Wis. 6-*

**SINGLE** men with dairy, poultry, general farm experience. Top farm wages. Chance for training and advancement. Excellent working and living conditions. Steady, year-round work. BOX 720, care Hoard's Dairyman, Fort Atkinson, Wisconsin. 13-*

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## MISCELLANEOUS

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**MAKE** up to $45-$55 week as a Trained Practical Nurse. Learn quickly at home. Booklet free. CHICAGO SCHOOL OF NURSING, DEPT. F-5, Chicago, Illinois. 7-6

**LOOK!** Full fashioned nylon mill rejects, 6 pr. $1.00. Imperfects, 3 pr. $1.00. Select imperfects, 3 pr. $2.00. Satisfaction guaranteed. PREMIER Sales, Box 8177, Chattanooga, Tenn.

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**TURN** spare hours into cash. Make and sell hats, handbags. Easy lessons include materials for 17 hats, blocks, supplies. Booklet free. LOUIE MILLER SCHOOL OF MILLINERY, Dept. FJ, Chicago 26, Illinois. 6-spl

## The Cow

*(From the Columbus County, No. Carolina, February Dairy Notes)*

The cow is a female quadruped with an alto voice and a countenance in which there is no guile. She collaborates with the pump in the production of a liquid called milk, provides the filler for hash, and at last is skinned by those she has benefited, as mortals commonly are.

The young cow is called a calf and is used in the manufacture of chicken salad. The cow's tail is mounted aft and has a universal joint. It is used to disturb marauding flies, and the tassel on the end has a unique educational value. Persons who milk cows and come often in contact with the tassel have vocabularies of peculiar and impressive force.

The cow has two stomachs. The one on the ground floor is used as a warehouse and has no other function. When this one is filled, the cow retires to a quiet place where her ill manners will occasion no comment and devotes herself to belching. The raw material thus conveyed for the second time to the interior of her face is pulverized and delivered to the auxiliary stomach. There it is converted into cow.

The cow has no upper plate. All of her teeth are parked in the lower part of her face. This arrangement was perfected by an efficiency expert to keep her from gumming things up. As a result, she bites up and gums down.

The male cow is called bull and is lassoed in Texas, fought in Mexico, and shot in Washington. A slice of cow is worth 8 cents in the cow, 14 cents in the hands of the packers, and $2.40 at the nearest restaurant.

## Ground Corncobs for Bedding

Ground corncobs make good bedding for dairy cattle, according to a report from Vincent Kohrs, dairy herd improvement association tester in Clinton County, Illinois.

Kohrs says the Oblate Fathers have been using sawdust for bedding for the past few years. But they recently changed to crushed corncobs, which they like much better. The cobs do not stick to the cows' bodies, and the cows look cleaner.

The Oblate Fathers get the corncobs from the elevator and run them through the hammermill into a bin in the dairy barn.

## Sale Announcements

May 15—Guernseys. The 27th Guernsey Sale, Forsgate Farms, Jamesburg, N. J. Louis McL. Merryman & Sons, Inc., Sale Managers, Sparks, Maryland.

May 15—Ayrshires. St. Lawrence Valley Ayrshire Club Production Sale at Gouverneur, New York. Tom P. Whittaker, Sale Manager, Brandon, Vermont.

May 24—Guernseys. Northwest Wisconsin Guernsey Sale at Chippewa Falls, Wis. Wisconsin Guernsey Breeders Ass'n, Sale Managers, Box 14, Waukesha, Wis.

May 26—Jerseys. Knollwood Farms Complete Dispersal at Chester, Illinois. Laurence Gardiner, Sale Mgr., Memphis, Tenn.

June 3—Jerseys. Slagle Annual Spring Sale at Delaware, Ohio. Gene Slagle, Sale Manager, Columbus, Ohio.

June 5—Holsteins. National Convention Sale at Roanoke, Virginia. C. B. Smith, Sale Manager, Williamston, Michigan.

June 14—Jerseys. Happy Valley Farms Annual Sale at Rossville, Georgia. Laurence Gardiner, Sale Mgr., Memphis, Tennessee.

Aug. 2—Jerseys. Southeastern Regional Jersey Sale at Talladega, Alabama. Laurence B. Gardiner, Sale Mgr., Memphis, Tenn.

Aug. 7—Jerseys. New York State Sale at Cobleskill, New York. Gene Slagle, Sale Manager, Columbus, Ohio.

Sept. 13, 1952—Jerseys. Your Opportunity Sale at North Portland, Oregon. Ross Wurm, Crystal Lake, Illinois, Sale Mgr.

Oct. 9—Jerseys. Western Pennsylvania Sale at Butler, Pa. Gene Slagle, Sale Manager, Columbus, Ohio.

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Sired by McDonald Farms King's Dairyman (sire, Myhaven King and out of McDonald Farms Daffodil, 602 lbs. butterfat GG); also, Woodacres Royal Dairyman (sire, Douglaston Prince Royal and out of Rockingham Recollect, 627 lbs. butterfat Jr. three-year-old). These youngsters are out of cows with good type and production. Priced to sell. A card will bring you prices, etc.

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DODGE JERSEY FARM Center Point, Ia.

### JERSEY BULL CALF

**Dropped November 10, 1951**

Sire: Brampton W. R. Lord Clair. Cl. "V.G." Superior Sire on first 12 dau. 563 lbs. B.F.

Dam: Royal Valiant Beauty. Cl. "Excellent" and a "Ton of Gold" Cow.

**Price and Pedigree on Request.**

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### A PRODUCTION BRED BULL

**Born May 24, 1951—Sire**—a Son of Flossy's Eagle Boy—Superior Sire rating of 674# F., V.G., Silver, Gold & Medal of Merit Bull and out of Brampton Goldie Likeness, V.G., Gold & Silver Medal Cow, 2X ROM records up to 807# F. **Dam**—Observer Treva Jill, Gold & Silver Medal Cow, 2X ROM records at 1-11 of 642# F., also at 3-2 a record of 637# F. Sire's daus. ave. 680# F. Dam has record of 900.3# F. & is a 627 lb. Tested Dam on 6 Daus.

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### BRYN MAWR FARM OFFERS

A Jan. bull calf by our Mermaid Golden Prince, Six Star. Very Good proven sire and out of Blonde Nina 480 lb. fat at 4 yrs., 2x. Nina, a daughter of Storrs Blonde Spitfire, senior Superior sire. Write for pedigree and price. **Route 1, South St. Paul, Minn., FRANK B. ASTROTH.**

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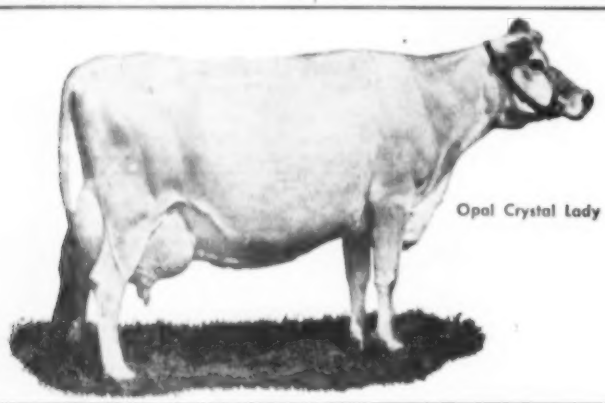

Opal Crystal Lady

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The "flash in the pan" type of cow isn't the kind of dairy animal that makes you the most profit in the long run. One good record doesn't mean much unless a cow can duplicate it during several lactations. The cows that come back year after year with strong, healthy calves and fine production records make the top profit for the dairy farmer.

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**1st Prize 2 Year Old Pacific International Exposition, 1946. On 3-time Milking she has made 871 lbs. of fat, 22,916 milk. Full Sister to Carnation Homestead Heilo Ormsby, fat: 1016 lbs.**

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THE bull we offer this week is a double grandson of Governor of Carnation, whose six nearest yearly tested dams average 1002 lbs. of fat in a year. He is Ear Tag #8942, born February 2, 1952. His dam, pictured above, has 3 year records in Class B including her 583 lb. record as a 2 year old. She is out of a first prize winning 809 lb. daughter of the 3-times All-American bull, Carnation Governor Imperial. The calf is sired by one of Carnation's most promising young sires, a show bull with 26 first calf daughters with records up to 830 pounds. Here's a bull with a future.

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**CARNATION ROYAL IMPERIAL**

This month we offer a January 18 son of Carnation Royal Imperial. This calf is dammed by Tansdale Aaltje Prilly, who has a Herd Test record of 593 lbs. fat and 16,992.6 lbs. milk as a 4 year old.

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**R. #12 Knoxville, Tenn.**

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Choice quality selected grade cows and heifers in any stage of pregnancy desired. Large selections available the year around. Negative to recent TB and State Laboratory Bang's Tests. Many of calfhood vaccination status. Procure our prices without obligation before buying elsewhere. We will not be undersold. Private sales daily.

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**CHESTNUT KNOLL FARM Purcellville, Va.**

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Offer a choice selection of bull calves, up to ten months old, sired by our great young sire, L. Regal Pearl, a 3 year old son of the noted Pabst Regal, from a 737-lb. 2x. Excellent cow of rich Ormsby breeding. Dams are all A.R. cows with 2x records from 400 lbs. as junior 2 yr. olds, up to 650 lbs. as mature cows. Several from 4* dams. Send for pedigrees and descriptions.
**A. J. LASHBROOK Northfield, Minnesota**
**(Accredited and Certified Herd)**

## Top Quality Bull Calf

We have a top quality bull calf born 11-7-51. He has plenty of quality and growth. His sire, and both grandsires are plus proven sires with increases up to 107 lbs. of butterfat for daughters over dams.

The dam of this young calf has a 2 year old record of 486 lbs. and a 3 year old record of 468 lbs. on twice a day milking. She has a wonderful udder and milks out fast, and quick to the machine. Photograph, pedigree and price supplied upon request. We invite your inquiry.

**MEDSKER FARMS Sullivan, Indiana**

## Paganok Gingerbread Man

High test, Herd Test Plus proven, Senior Sire at Paganok. Sire before him likewise Plus proven in Herd Test, and also for high test. "Gingerbread Man" has maternal sisters to 850 lbs. Fat. **How about a "Gingerbread Man" son for your next herd sire?**
**SCOTT MEYER & SONS, Hannibal, Missouri**

## Classy Young Bull For Sale

A strong, rugged calf. Should make excellent herd sire. 7 nearest tested dams ave. fat 895, milk 24,440.

**Sire,** Crown Imperial Inka Premier, is grandson famous producer, Carnation Inka Hazelwood Walker: Fat 365d 5½y 1,032 milk (4x 3.8%) 27,181.

**Dam** carries blood Carnation Hello Ormsby Matador, 1,006 fat, nearly 25,000 milk (4%); also Carnation Walker Hazelwood, nearly 1,200 fat and over 29,000 milk (4.1%)

**For descriptions write**
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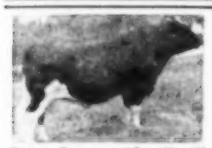

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# What About Cud Transfers?

**They have worked wonders in some cases. We still have a lot to learn, however, and they are not a substitute for good management.**

*by E. A. Woelffer, D.V.M.*

WILL a cow die if she loses her cud? If that question had been asked fifty years ago, the answer most likely would have been yes. Today we hear very little about cows losing their cuds, probably because we attach less significance to it.

Cows lose cuds for various reasons. A few of the causes are coughing, a sensitive tooth, indigestion, choke, poison, etc. Death associated with loss of cud is due to one of the primary causes such as acute indigestion, choke, or poisoning rather than to a symptom, which in this case is loss of a cud.

### *Cuds carry bacteria . . .*

In recent years we have been very much interested in a cow's cud, but from a little different angle. Dr. Pounden and co-workers at the Ohio Experiment Station found that when some of the cud contents of cows were transferred to calves, improvement resulted. This improvement was observed mostly in unthrifty calves that were being raised in separate pens away from older animals. They conducted controlled experiments and found that the calves that were given the cuds or rumen content of cows did better than those not treated with this material.

The experiments indicated that these unthrifty calves lacked certain harmless bacteria that are necessary for proper fermentation and digestion in the rumen. Calves on nurse cows are believed to be naturally inoculated by their association with cows, particularly if they eat from the same feed manger.

### *Off-feed cows . . .*

Other investigators and veterinarians have found that some ailing cows also respond to inoculations with rumen contents from healthy cows. Off-feed cows from improper feeding or from increased feeding for higher milk or beef production have also been benefited from such treatments.

When the rumen becomes overloaded or slow and sluggish from causes such as injury, infection, high fever, over-dosage from drugs or other abnormal conditions, loss in gain or milk production can be reduced through rumen transplants. Of course, it will be necessary to correct the primary cause first or simultaneously to bring about rapid and complete recovery. For example, if the cow is suffering from a foreign body in the second stomach that is penetrating the heart sac, it wouldn't do much good to try to treat the rumen without also doing something about the foreign body.

### *Why "reseeding" helps . . .*

Unlike horses and humans, cows and other ruminants are largely consumers of coarse, fibrous plant foods. To permit handling of such foods, nature has supplied ruminants with a large storage compartment, the rumen or first stomach. The rumen, however, is more than a storage space. Important pre-digestion or fermentation activities are carried out in the rumen under normal conditions.

When abnormal situations develop, the pH (acid-alkali ratio) changes and normal fermentation of this cellular material is impaired. For more rapid recovery in cows that are sick or fail to eat, one of the veterinarian's goals is to re-establish the normal bacterial flora of the rumen and the appetite as rapidly as possible.

In addition to other medication, it is usually advisable to reduce the grain ration when digestion is interferred with. Recovery in some cases can then be hastened by the administration of rumen transplants. The theory behind these rumen transplants is that normal activity can be more readily re-established by reseeding with the right kind of bacteria.

If your calves are pail-fed and are kept in separate barns or pens and disease or infection are not present, and sanitation, ventilation, and feeding practices are good yet the calves do not respond, rumen transplants may be the answer to the problem. On the farm where rumen inoculations are practiced routinely, the usual procedure is to obtain one or two cuds from a healthy cow in the herd and place it in the calf's mouth at about 10 days of age.

With a little practice the cud can be easily removed from the cow's mouth. The same procedure may be used in transferring cuds from healthy cows to adults that are ailing, except that more material is required.

Sometimes fresh rumen material is obtained from a recently killed animal at the local slaughter house or stockyard, but this practice is not without danger. In such cases, the rumen ingesta should come from a member of a herd whose health history is known. The regurgitated boluses of cuds from healthy cows or a portion of the rumen content from a healthy slaughtered cow may be placed in the mouth, but the most practical way is by means of the stomach tube and pump.

### *More information needed . . .*

While experience indicates that rumen transplants work wonders at times, its exact value or usefulness needs to be exploited further. More study on rumen activity and bacteriology as well as clinical study is needed before definite appraisal of the practice can be made. Accurate information relative to proper amounts to administer is lacking. Some authorities feel a considerable amount is necessary — from one to five gallons of juice diluted with water. Others feel that the solid material is important along with the juice to restore digestion.

Rumen transplants appear to have a place in treating sick or off-feed animals, not as a substitute for other necessary treatments but as an aid in restoring rumen activity with a minimum of loss in flesh and milk production.

## Livestock with Injured Feet Need Prompt Care

Spring rains and rough objects in the barnyard can team up to play havoc with the feet of livestock, the American Veterinary Medical Association warns.

Animals with any kind of foot soreness or lameness should be removed immediately from the herd and placed on dry ground or in a dry stall in the barn. Then the feet should be inspected by the owner, to see if any visible thing is causing the trouble.

The lameness may be due to nothing more than a nail that has worked into the hoof or to rocks or cinders wedged in the hoof. If there is no redness or swelling in such cases, the offending object should be removed with care and the excess hoof growth trimmed off. However, the AVMA points out, any evidence of infection should be the signal to get a veterinarian's professional assistance, because neglect or unskilled treatment may result in permanent disability.

J. VanMouwerik, Redlands, Cal.

R. French, Schenevus, N.Y.

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# Veterinary Column

E. A. WOELFFER, D.V.M.

## More About Acetonemia

Nineteen cows with ketosis (acetonemia) ranging in degree from mild to severe were treated by feeding sodium propionate at the rate of one-eighth to one-half pound daily. All of the cows showed increases in milk production and improvement in appetite.

At the end of 10 days or less of treatment, sugar values were up to normal in all cows and the blood ketones had returned to normal in all but three cases.

The above findings were reported in the January 1952 issue of the Cornell Veterinarian by L. H. Schultz of the New York State Experimental Station.

### Acids in Rumen

Since it is known that certain acids, principally the fatty acids, are important products of fermentation by the normal bacteria in the rumen (first stomach) of cows, Schultz and co-workers set out to study the relationship of these acids to ketosis. The important ones in rumen fermentation (digestion) are acetic, propionic, and butyric acids.

They found, as far as ketosis is concerned, that when an excess of propionic acid was present, it was a a desirable thing. When butyric acid was high, however, it wasn't so desirable. Furthermore, they found that there was no particular upset in the normal proportion of these acids in the rumen of cows with ketosis.

They did observe, however, that the total amount in a given quantity of the liquid contents of the rumen was lower than when ketosis was not present.

### Sodium Propionate is Readily Available

Propionic acid is used by the animal to help maintain the sugar level in the blood. In view of this, a salt of the acid sodium propionate was experimented with because it appeared to be a suitable product for the purpose and because it was readily available.

### How to Feed It

The method of administering the sodium propionate is fairly simple. If cows are eating grain most of them will eat it if it is mixed in well. If they do not eat it readily, smaller amounts are recommended (about an ounce) for the first few days. Then the amount can be increased to two ounces per feeding to give ¼ pound daily.

In mild cases a ¼ pound daily seems sufficient. In more severe ketosis, ½ pound daily in 2 doses is more effective. When the larger amount is given and when the cow is not eating grain, it is necessary to give it by capsule or drench. The material is very soluble in warm water. It is not known how large a dosage can be given without harm.

The scientists are of the opinion that 10 days of treatment are sufficient for most cows. Some cows, particularly the extremely fat ones, required a longer period for the blood picture to return completely to normal.

While it is felt that the use of sodium propionate will prove helpful in the control of ketosis, additional experience is necessary before conclusions regarding its definite value can be drawn. The author points out that it is extremely doubtful whether any ketosis treatment will work on all cows because of the apparently complicated nature of the disease.

The author does not suggest that this treatment replace the present widely accepted treatments of ketosis with such things as dextrose, chloral hydrate, and cortisone, but that it offers an additional tool which will be valuable in the control of the disease. It is not known whether sodium propionate is useful in preventing the disease.

Research work on this is in progress at the New York State Experimental Station.

---

## COW WITH RHEUMATISM

**We have a good cow that had a rheumatic condition after she freshened and we'd like to know what chances she has of getting it back. She is 8 years old. Would you advise us to sell her?**

**Another cow freshened with a pair of twins in September and has a white watery drainage since. We would like to know if there is any cure for her.**

**Marshfield, Wis. W. R.**

Chances are that your 8-year-old cow will become progressively worse as she grows older. In making your decision as to whether you sell or keep her, we suggest you take into consideration her date of freshening, the value of the calf, and the possible production of the cow after she freshened. If she is to freshen soon, it would seem advisable to let her freshen out and in the meantime keep her as comfortable and well-bedded as possible, preferably in a box stall.

The cow that freshened with twins apparently has what we call a chronic metritis. The uterus has a quantity of fluid and pus in it which must be removed and the infection destroyed before the cow may be bred back. We suggest you have your veterinarian examine her to determine her condition and if there is hope for her, proceed to treat her. Many, but not all, such cases can be successfully treated.

---

## WHITE SCOURS

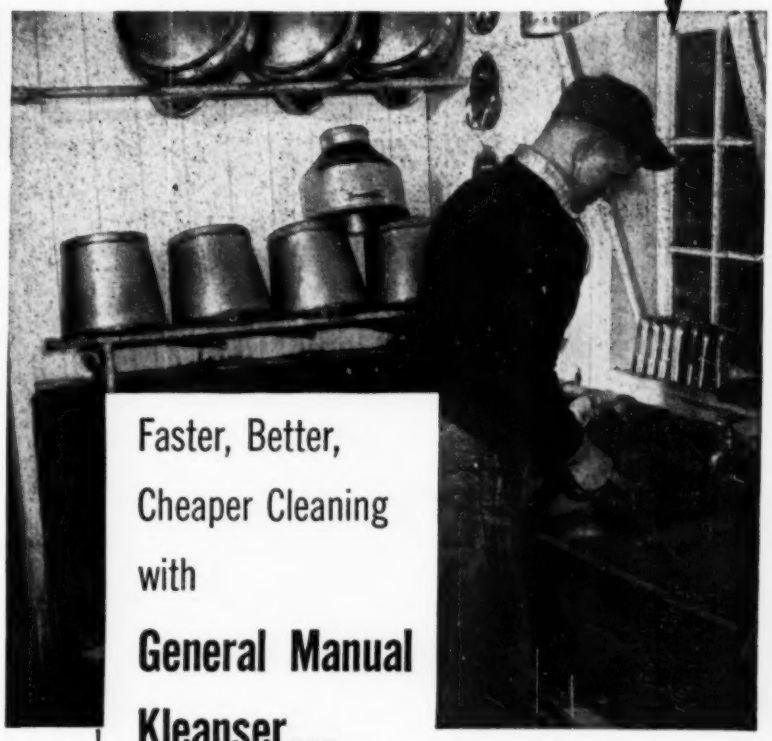
**What is the cause of a new-born calf to have the scours? I had trouble with my last five. Is it caused from the cow? If so, is there anything that can be done to prevent it?**

**Nampa, Idaho A. W. G.**

From the history you have given, the condition in your calves is an infectious scours called "white scours" or calf septicemia. This disease is sometimes difficult to treat and control.

By having the cow freshen in another barn will often help control the disease. Clean, well bedded box stalls and other sanitary precautions must be taken.

If a veterinarian is available, we suggest you counsel with him. He may wish to recommend early injections of serum and bacterins and treatment with sulfa or some of the antibiotics.

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Fieldman Walter Jessup, of Millside Farms, Inc., Riverside, N.J.

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